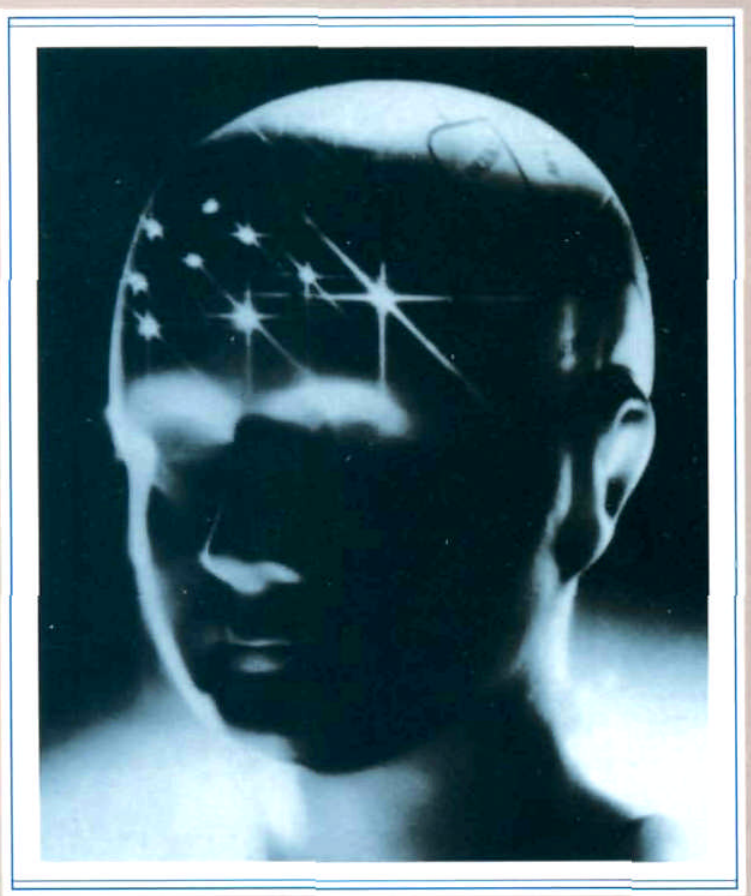
the Skeptical Inquirer

The Evidence Concerning ESP: Two Critiques



NOVA's ESP Debacle / Poltergeist Pretense
Modern Folk Beliefs: How They Begin
Psychology and UFOs
Sir Oliver Lodge and Spiritualism

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the Skeptical Inquirer

THE SKEPTICAL INQUIRER is the official journal of the Committee for the Scientific Investigation of Claims of the Paranormal.

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ON THE COVER: Publicity photo for NOVA's "The Case of ESP." (See pages 296, 373, and 380.)

News and Comment

Evolution and Science Education in Texas: Two Victories After a Winter of Discontent

QUALITY SCIENCE-EDUCATION in Texas and potentially across the whole nation was recently dealt a severe blow when the Texas State Board of Education adopted biology textbook guidelines that blatantly excluded references to evolution and to the work of Darwin. Publishers of textbooks wanting any share of the lucrative Texas market would have had to comply with these guidelines in order to have their books win a listing among the final few titles from which school districts throughout the state choose their books. Few districts choose from books outside this list, because to do so would require local funds instead of state funds. If the publishers complied, and there was no reason to suspect they would not, biology texts in public schools across Texas and beyond (books on the Texas list are sold in many other states) would be misleadingly void of evolutionary material for the next several years.

This is why two dramatic events this Spring that appear to reverse the antiscience tide in Texas were greeted with so much acclaim by pro-evolution and anti-censorship forces. First, in March, Texas Attorney General Jim Mattox issued an opinion that the Board of Education's general rule on evolution coverage—requiring textbooks to refer to evolution "as only one of several explanations of the origin of humankind"—was unconstitutional. Then, on April 14, the Board overwhelmingly voted to repeal this rule.

This followed a closed session at which the Board was told by its own attorney that the attorney general's opinion meant no aid would come from the A.G.'s office should the rule be taken to court. As litigation was looming, and as the Board would have to use educational funds to finance its defense of the rule, the Board was forced to change its position drastically, despite overtures made earlier by a few members to the contrary.

Michael Hudson, Texas coordinator of People for the American Way, one of the groups battling the restrictions on evolution coverage in textbooks, said the Board's repeal of the restrictions was as significant as the Scopes monkey trial.

It remains to be seen if this dramatic turn-around will be viewed by textbook publishers as a message that it is okay to include coverage of evolu-

tion in Texas biology textbooks. Nor is it clear how the biology texts to be selected in Texas this year will be affected.

Nonetheless, an important step has been made toward quality science education in Texas, thanks to the efforts of concerned scientists, science educators, and anti-censorship groups. It may mark the beginning of continued efforts for much-needed improvement.

Another encouraging event came in March, when a group of states, including Florida, New York, and California, served notice to the publishers of biology books that they would not accept textbooks with inadequate coverage of evolution just because they were written for Texas.

Such an anti-evolutionary bias is the product of a fundamentalist faction within the elected body of the State Board that includes its chairman, Joe Kelly Butler. The guidelines reflected not only this bias but also the more general rule qualifying any references to evolution in textbooks used at the present time. The efforts of Steve Schafersman linked this rule to the well-known textbook censors, Mel and Norma Gabler. (See "Censorship of Evolution in Texas," *Creation/Evolution*, Fall 1982, pp. 30-34.)

Concerned scientists and educators testified for the inclusion of evolution in these guidelines at a public hearing in November 1983. Creationists, also testifying, praised the guidelines and had difficulty finding anything to protest, save for a vague reference to "controversial issues." Leading in the attempt to include evolution were the Texas Council for Science Education (Schafersman's group), People for the American Way, and faculty members from state universities. Notably absent were representatives from such groups as the state's Biology Teachers Association, Science Teachers' Association of Texas, and the Texas Academy of Science. In Texas, social-studies teachers' groups have a much more active record fighting censorship than do science teachers' groups.

Efforts for inclusion at first appeared to bear fruit. A few school board members and publishers requested suggested amendments from pro-evolution testifiers before the guidelines were to be acted upon in January 1984. A set of such amendments, coordinated by People for the American Way, was submitted by a group of scientists and science educators, but no amendments were adopted in January, under the advice of Chairman Butler.

Meanwhile the chairman of the governor's Select Committee on Public Education, H. Ross Perot, attempted to avoid becoming involved by stating that there are far more important issues in Texas education than coverage of evolution. Only a scant minority within the great number of education officials, such as board member Virginia Currey, spoke out for the importance of evolution in both the life and physical sciences.

While waiting for the attorney general's decision, such groups as the Texas Council for Science Education and concerned individuals prepared to review what were expected to be watered-down, third-rate biology texts. Undertrained biology teachers would undoubtedly follow the material in such texts, and responsible ones faced at best uncertain professional support should they supplement the texts with materials accurately reflecting the evolutionary foundation of the life sciences.

As newspaper editorials nationwide and letters from Texans denounced this censorship as salt in the wounds of our country's public educational malaise, biology students in Texas and elsewhere were being held hostage for possibly

many years by an obscurantism smelling of sectarian politics.

In early February 1984, a statement petitioning the State Board to postpone finalizing the guidelines until a committee of professional scientists and educators in Texas studied the negative effects on science education caused by the rule was submitted to the board. Coordinated by People for the American Way, and cosigned by 54 outstanding scientists (e.g., Stephen Jay Gould, Carl Sagan, Steven Weinberg), educators, clergymen, and concerned organizations, this statement added nationwide professional criticism to the growing negative press coverage.

When the Board finally voted out the rule in April, they replaced it with a requirement that in all subject matter in all subject areas theory be presented as theory rather than as fact, a move seen by some to placate the now thwarted creationist effort to keep the rule.

But the disclaimer all textbooks have had to carry saying evolution is only one theory about man's beginning was now no longer necessary. "Not since 1925," said Michael Hudson, "has there been a more important ruling."

—*Ronnie J. Hastings*

Dr. Hastings is a member of the Texas Council for Science Education, the CSICOP Education Subcommittee, and the Dallas Society to Stop Pseudoscience.

The 'Psychic' and the Plane Crash

WHEN A SMALL plane carrying a Florida family disappeared over the rugged mountains of northern New Mexico in December, it proved a perfect opportunity for a Salt Lake City "psychic." Called into the case by the pilot's brother, she made public her "predictions" about the plane's whereabouts and the condition of its occupants only (you guessed it) *after* they were found. That, combined with the fact that the last-known position of the plane (the point at which it disappeared off of radar scopes) was fairly well known, made the woman, Pat Matthews, seem very prescient indeed!

At least so thought the news media. The normally sober *Albuquerque Journal* devoted a half-page feature to gushing over the "psychic" and her supposed special abilities.

The pilot, Tony Mink, and his son had been found alive in the snow-covered plane. His wife was dead.

Matthews, who bills herself as a clairvoyant, said she had had "feelings" that Mink was alive. "I was asked to concentrate on Tony, and I could feel movement in his body. I was asked if he was still alive, and my feeling was, yes, he was very definitely alive." The *Albuquerque Tribune* reported that she said she could not get such a feeling about Mink's wife, Charlene, who had by then died of her injuries.

As for location, the *Journal* quoted Matthews: "Ron [Mink's brother, who lives in Salt Lake City] handed a map to me and I pointed. I drew an X on the map and said, 'It's right in this area.'" The news reports didn't say where the X was in relation to the crash site, but they implied that she had helped find the plane and certainly had special powers. In fact, the *Journal*'s subtitle was "Utah Woman's Concentration on Map Helps Find Downed Pilot." Subsequent disclosures cast a considerably different light on the subject.

The newspaper articles were published on Dec. 29 (*Tribune*) and Dec. 31 (*Journal*). This, as mentioned, was after the plane had been found. The

Focusing on Feelings

Utah Woman's Concentration On Map Helps Find Downed Pilot

Utah psychic spurred family's search

"She could tell that Tony (Mink) was alive and he was moving around and trying to take care of things." — Ron Mink, brother of crash survivor

Clairvoyant Pat Matthews in Her Salt Lake City Office With Articles on Tony Mink

clairvoyant was seemingly safe in publicizing post hoc her supposed clairvoyant impressions. In actuality, the articles about her impressions provided an inadvertent lesson for all.

For they showed that she managed to miss the most sensational aspect of the entire case. A few days after the articles appeared, searchers, previously hampered by the deep snow and bitter weather, found $19,000 in cash and 14 grams of cocaine hidden in the plane. Reporters subsequently found Florida police records listing the co-owner of Mink's plane as one of 83 defendants indicted in a Florida drug-bust operation. Mink had been charged in 1982 with receiving stolen machine-gun parts. And he had had his pilot's license revoked after ditching a marijuana-laden DC-3 off Bimini.

All these revelations the psychic had totally missed. The newspapers had unintentionally carried out a public experiment. They provided more evidence that so-called psychics really have no special abilities. They may be able to reveal information already known but otherwise fare no better than the rest of us.

But what about the claims that she had helped find the crashed plane?

Those didn't stand up either. And the Civil Air Patrol was highly upset at the media reports giving her all the credit.

Dwight R. Jenniston, Albuquerque senior squadron II commander for the CAP, gave his version of events. In an illuminating letter to the editor (*Albuquerque Journal*, Jan. 5, 1984), he castigated the newspaper and provided a valuable perspective on such psychic claims. His comments are worth repeating in some detail:

"While a half-page article was devoted to a psychic who supposedly aided the rescue, no mention was made of the FAA and Civil Air Patrol personnel who found the radar track of the missing aircraft, followed it until it was lost within a mile or so of the actual crash, and then searched the computer tapes to ensure that the track

The Columbus 'Poltergeist' Case

Early this spring, when reports began to surface of an alleged poltergeist terrorizing the Resch family of Columbus, Ohio, CSICOP was besieged with requests to investigate. Extensive media coverage indicated that the mysterious disturbances—objects flying through the air, electric lights spontaneously going on and off, the bathroom shower turning on by itself, etc.—occurred only when the Resches' 14-year-old adopted daughter Tina was present. A *Columbus Dispatch* photo showed a telephone receiver flying through the air. Numerous visitors and reporters on the scene attested to these phenomena.

Especially interesting was an ABC-TV-affiliate videotape of Tina, taken at a time when she was unaware that the camera was running. When the tape was shown on ABC stations in slow motion, on the two occasions of supposed poltergeist activity Tina was seen to knock down a lamp by sleight of hand—a clear indication of trickery.

CSICOP sent a three-man team to Columbus to investigate: James Randi and professors Steven Shore and Nicholas Sanduleak of Case Western Reserve University. When the three arrived in Columbus, they were refused entrance to the Resch home, while at the same time

From the *Columbus Dispatch*, photo by Fred Shannon

Tina Resch and the "flying phone."

did not appear elsewhere. It was this radar data, given by the CAP to the helicopter crews who located the survivors, which determined the focus of the search.

"It would have been an interesting experiment to compare psychic predictions with the radar information had the latter been withheld from the press. However, we routinely report such information publicly in order to elicit leads from people in the area of the crash who might have heard or seen something. . . . Indeed, a large per-

William Roll, the well-known parapsychologist from Chapel Hill, North Carolina, was admitted.

Although not allowed in the house, the CSICOP team intensively questioned, in person or by phone, most of the participants—the parents of Tina Resch, reporters, photographers, TV cameramen, and others who had been at the house. It appears that none of those interviewed ever saw a stationary object take off, but only witnessed the objects flying through the air. This was also true of the phenomenon of the flying phone, which was easily replicated. (See photos.) These facts strongly suggest further trickery.

After spending several days at the house, Roll maintained that Tina Resch had demonstrated RSPK (recurrent spontaneous psychokinesis), and he spirited her back to North Carolina for further testing.

It is the considered judgment of Committee investigators that it is impossible to distinguish between what occurred at the Resch house and a simple hoax. Indeed, the Columbus "poltergeist" may well turn out to be a classic case of media misinformation and public gullibility provoked in large measure by an adolescent with serious behavioral problems.

Randi, Shore, and Sanduleak will publish an extensive and detailed report of their investigation in a future issue of the SKEPTICAL INQUIRER. —*Paul Kurtz*

From the *Niagara Gazette*, photo by Ron Schifferle

CSICOP Chairman Paul Kurtz performing a similar feat.

centage of crashes are found very near the last-known radar position.

"Reporting undocumented and untested claims as fact is a disservice to the public. . . .

"In my six years of search and rescue experience, we have had numerous psychic predictions of location. Never, to my knowledge, have any such predictions 'aided' a search by both being correct and telling us something we did not already know."

—*Kendrick Frazier*

NOVA's Pro-Paranormal ESP Program

Over the past decade, the PBS NOVA television series has provided consistently high-quality documentary science programs—authoritative, informative, and quite often entertaining as well. It has also on occasion turned its attention to fringe-science topics, and on those occasions its scientific standards were equally excellent. Programs on von Däniken's ancient-astronaut contentions and on the Bermuda Triangle legend in the mid-1970s and on UFOs in 1982 all put the harsh light of critical scrutiny onto claims rarely analyzed on television. This is why NOVA's "The Case of ESP," telecast in the United States in January 1984, was such a disappointment. Produced and aired originally in Great Britain, it was a notable departure from its predecessors. Rather than critique and evaluate the controversial claims of the promoters of paranormal abilities, the program itself, after some token skepticism in the first twenty minutes, became a party to their interests. Many persons and groups have complained about the program. The following letter was sent to John Mansfield, NOVA's executive producer at WGBH-TV in Boston, by Paul Kurtz, chairman of the Committee for the Scientific Investigation of Claims of the Paranormal. For further commentary see the Reviews and From Our Readers sections of this issue.—ED.

Dear Mr. Mansfield:

I consider NOVA to be the best science program on television and have always appreciated its excellent contribution to the public's understanding of science and high-quality science reporting.

Many members of the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP) were thus deeply disturbed by the program, just aired in the United States, "The Case of ESP," produced by Tony Edwards. Although the first part of the program was, in my judgment, fair-minded and balanced, in the second part Mr. Edwards goes overboard by presenting highly controversial and disputed studies on the paranormal as demonstrating the existence of ESP—

Media Awake to Psychics' Failed Predictions for 1983

A REVIEW OF specific predictions made by various Northern California "psychics" at the beginning of 1983 indicated that they turned out to be almost 100 percent wrong. The review was conducted by Robert Sheaffer, one of the founders of the Bay Area Skeptics (BAS).

The psychics' failures would hardly be surprising to readers of the SKEPTICAL INQUIRER. But actually keeping track of what psychics said the year before is apparently quite a novelty to most people. A Bay Area Skeptics press release at the end of December recounting these failures generated dozens of interviews, articles, and broadcasts. BAS has since expressed hopes that the flurry of press interest will now stimulate reporters and writers to keep track of local psychic claims themselves. The results make good stories.

Here is the psychics' record, as compiled by Sheaffer.

Many of the predictions were either extremely vague or so obvious that they would have occurred to anyone looking

clairvoyance, precognition, telepathy, and psychokinesis. For example, Mr. Edwards presents the work of Targ and Puthoff of SRI as having demonstrated the reality of remote viewing. Yet their experiments have been submitted to sustained criticisms in various scientific publications for poor experimental design and other defects in protocol. At one point, Targ is in the room with Pat Price while Price is engaged in remote viewing, posing questions and commentary, which is hardly an objective procedure.

Although earlier in the program, Edwards does cite several criticisms, the producer has an editorial bias in favor of paranormal phenomena and the program builds up in crescendo, allowing the viewer to believe that although skeptics have had their say, parapsychology has made or is on the verge of making a breakthrough. It shows Nina Kulagina demonstrating psychokinetic feats without any proper controls, so that whether she is doing standard magic tricks or demonstrating genuine psychokinetic effects is uncertain. The viewer can only conclude the reality of the phenomena. We are told that Delphi, a new venture by Targ, scored nine correct guesses on the commodity exchange, as if this proves the practical applications of precognition, though as an afterthought the statement is made that the results of Delphi have not been replicated.

I think that the program leaves the viewer with a false impression of the status of current scientific research in this controversial area and it presents pure speculation about alleged breakthroughs and, or replications as genuine.

We are prepared to offer a step-by-step critique of these and other points in detail if you would like us to further document our concern that the program was unbalanced and editorialized in favor of the parapsychological phenomena, when it should have been more cautious.

I trust that you will take these comments as an effort to contribute to the proper understanding of science—its advances and its blind alleys. They are written because of our otherwise profound respect for NOVA.

Sincerely yours,
Paul Kurtz
Chairman, CSICOP

forward to 1983. But among their *specific* predictions there were almost none that came to pass, and there were some rather spectacular misses:

Dagmar Morrow predicted that President Reagan would suffer a mild heart attack in the summer of 1983 and that Mrs. Reagan would suffer health problems due to fatigue.

Olga Sepulveda said that smart investors should stay away from stocks in the coming year. (The popular stock market averages rose about 20% in 1983.) Her prediction was that the 1983 World Series would be played between the New York Yankees and the Cincinnati Reds. In fact, it was between the Baltimore Orioles and the Philadelphia Phillies.

B. Woods Mattingley predicted that there would be a California earthquake of magnitude 6.0 or more "around the first of the year," perhaps in the vicinity of Clear Lake. On January 1, 1983, he predicted it was "imminent" and should be expected any day. The only major California earthquake of 1983 hit Coalinga on May 2, four months later and 200 miles farther south than Mattingley predicted.

Benny Holloway predicted that Ronald Reagan would suffer serious health problems in 1983 and would resign the presidency. She also predicted that Princess Diana would become pregnant again, and Queen Elizabeth would abdicate the throne.

Pedro Hidalgo predicted that George Bush would assume the presidency because of Reagan's health problems during 1983 and forecast that former California governor Jerry Brown would get married.

"Psychics" elsewhere in the country fared no better than did those in the Bay Area. Among the predictions made by nationally prominent "psychics":

New York "psychic" Shawn Robbins predicted that a disastrous earthquake would strike San Francisco in the summer of 1983 and that Jimmy Carter would run again for president this year.

Jeane Dixon, the famed "seer" from Washington, D.C., predicted a major international confrontation over "peaceful islands of the South Pacific" in 1983. She also predicted that Princess Diana would release news of a new pregnancy "before the year [1983] is very old."

Irene Hughes of Chicago predicted that the Ayatollah Khomeini would be assassinated in 1983, and that Jacqueline Onassis would wed a prominent publisher in Paris.

Los Angeles "psychic" Clarisa Bernhart predicted the discovery of vast new oil and gas fields near Flagstaff, Arizona, in 1983, and that fitness guru Richard Simmons would be shot. (Bernhart, who has convinced many that she can predict earthquakes, predicted in 1980 that a massive earthquake would strike Alaska in 1981, opening up the world's largest gold vein.)

Uri Geller (remember him?) predicted that Reagan would resign the presidency due to ill health by September 1983. Geller had also predicted that a major earthquake would strike southern California in November 1982.

Of the hundreds of predictions published by dozens of self-proclaimed psychics, not one of them succeeded in guessing any of the surprising events that actually happened in 1983, such as the invasion of Grenada and the Soviet attack upon the Korean airliner. "The results of 1983 were the same as every other year for which we have records," said Sheaffer. "A flurry of predictions at the beginning of the year, almost all of which turn out to be wrong, but nobody except a few skeptics ever bothers to check up. So the failed predictions are simply forgotten, a new spate of predictions are issued for the following year, which will probably look equally foolish twelve months from now."

CSICOP Forms Parapsychology Subcommittee

AS PUBLIC INTEREST in psychic claims and psi phenomena continues, CSICOP is increasingly called upon to evaluate new developments in parapsychological research—from the so-called psychic arms race to remote viewing, the Gansfeld effect, and psychokinesis. Often, proper appraisal of these claims requires visits to parapsychological laboratories.

CSICOP would like to broaden its efforts in this area. The Executive Council has established a Parapsychology Subcommittee to work constructively with serious scientific researchers in parapsychology in order to promote and contribute to such research. Although CSICOP will not take an official stance on their work, subcommittee members will make public the results of their investigations.

The chairman of the new subcommittee is Professor Ray Hyman of the University of Oregon, who also serves on the Executive Council and is a CSICOP Fellow. The other members are Professor James Alcock of York University in Toronto (co-chairman of CSICOP's Canadian section), Charles Akers of Durham, North Carolina, Professor Terence Hines of Pace University, James Randi and Paul Kurtz.

—Paul Kurtz

Mystic Book Club

LAST FALL WE noted that Publishers Central Bureau, of Avenel, N.J., was considering plans for a Mystic Book Club. If they got a good response to their announced intentions, they would go ahead. They apparently did, and they have.

Promotion packages were distributed earlier this year inviting charter members to "begin a journey deep into the mysteries and marvels of the occult. . . . You will be astounded. Baffled. Some of your most logical (and precious) beliefs will be shaken." The promo begins with the standard litany of teasers: ". . . The phone rings—and the caller is someone you were thinking of just a moment before. . . . You have a terrifying dream about someone—and later learn that the person was in extreme danger at that very moment."

One item refers to "the ship that disappeared from a Philadelphia harbor and mysteriously appeared—seconds later—in Norfolk, Virginia." This is an apparent garbled reference to that old chestnut, the so-called and alleged "Philadelphia Experiment." You won't be surprised that Larry Kusche, in his review of the William Moore book of the same title (Fall 1979), said his own investigation of the story showed it to be "part misinterpretation, part hoax, and part show biz."

Needless to say, the Mystic Book Club flyer offered not one phrase of skepticism or any semblance of scientific attitude toward any of the claims it mentioned.

African Villagers Burning 'Witches' at the Stake

VILLAGERS IN A TRIBAL zone in the northern part of South Africa are burning suspected witches at the stake, according to news reports out of Johannesburg (UPI, Feb. 21, 1984). Police are virtually powerless to halt the killings. "This has become a national problem and we cannot tackle it alone, said Col. Peter Moloto, police liaison officer in the Lebowa tribal homeland. He said nine people had

recently been burned at the stake and two hanged after they were accused of being witches who, for a fee, called down bolts of lightning on unsuspecting victims. Police in Lebowa had arrested dozens of people on murder charges but had no idea how to deal with the ancient superstition that encourages ritual killing.

"In the past," Moloto told the *Sowetan* newspaper, "people accused of witchcraft were driven out of the villages, but in the past ten years there has been this tendency to execute them."

Batir Responds

THE FOLLOWING MESSAGE, apparently in response to Thomas Sebeok's contribution in our Winter 1983-84 issue, made its way to the SKEPTICAL INQUIRER through clandestine channels with the aid of Piet Hoebens.

PATRIOTIC SOVIET ELEPHANT RESPONDS TO U.S. IMPERIALIST SLANDER

Dear Professor Sebeok!
Reading your verse gave me quite a shock.
Obviously you view as bunk
the wonders coming from my trunk
(implying that my gift of speech
is a trick by N. Ivanovich).
Your reference to "propaganda"
is shameless anti-Soviet slander.
A cheap insult—you'll understand—
to that Glorious Fatherland
to which belong the Khazak moors

pachydermatously yours,

BATIR

(Member of the All-Soviet Union of Socialist Mammals)

Australian National Enquirer

THE *NATIONAL ENQUIRER* has gone done under. The infamous *Enquirer* has an Australian edition called the *Star Enquirer*. It consists mostly of articles from the U.S. *National Enquirer* with a few local stories added.

The first edition of Jan. 11, 1984, had American articles entitled "Flight 007 Was Destroyed by Psychic Forces" and "I'm the Father of a Space Alien Baby." Local stores included details of the Virgin Mary's regular visits to an Australian farm, photos of Christ's face in an Australian cloud formation, and a holy farm claimed to be the home of three angels.

—*Mark Plummer*

In Brief

THE CANADIAN GOVERNMENT has authorized a U.S.-owned company called E.S.P. Productions Ltd. to establish a business at Dartmouth, Nova Scotia, to provide "psychic services" to Canadians. E.S.P.'s services were said to include palm-reading, clairvoyance, tarot cards, and astrology for entertainment purposes. The government's Foreign Investment Agency in Ottawa, which screens proposed investment projects by non-Canadians, said, according to the *Wall Street Journal* (Nov. 21, 1983), that the venture was compatible with Canada's industrial and economic policies and would provide "improved product variety and innovation."

* * * * *

Kudos to the "Entertainment This Week" television program for a feature on *National Enquirer* predictions for

1983 that recounted the wrong ones published a year earlier. The Dec. 31, 1983, program telecast an interview with the *Enquirer's* editor about how at annual-predictions time the staff sat around a table with a case of beer and here he smiled broadly "got very psychic," i.e., made them up. They then "bounced them off the psychics" to see how they liked them. It's just for entertainment, he said.

* * * * *

A scientific organization in India has published a 32-page English-language booklet designed in part to counteract pseudoscience and superstition. Published by the Indian Association of College-Going Scientists and entitled "Scientific Outlook," it contains such chapters as "Science and Religion." "Scientists Mystify Science" (criticizing the mystical physics writers), "Astrology Is Unscientific," and "Godmen or Fraudmen?" A limited number of free copies are available (include $2 in international coupons for mailing expenses). Write to Wilfred D'Costa, Chairman, IACGS, 344 1, Hall Road, Kurla, Bombay 400070, India.

* * * * *

SI subscriber Elver A. Barker of Denver writes the following open letter to other subscribers: "My complete set of the SKEPTICAL INQUIRER with the first index has been accepted by the library of my alma mater, the University of Denver. I assured the Acquisitions Dept. that I will mail each future issue to the Serials Dept. for as long as I shall live. It is too valuable a journal to be left unused on home shelves, and it should never be discarded. I suggested that more subscribers call the public and university libraries in their communities to inquire if they receive it, and if not donate all their copies for others' use. If private or library holdings are found to be incomplete, missing issues could be supplied by donors. . . . Subscribers who do not wish to give up their sets could offer a gift subscription to one or more libraries of their choice." We heartily second the idea.

* * * * *

When followers of the Maharishi Mahesh Yogi announced in February that they have plans to bring 7,000 TM practitioners to New Mexico and make the state the meditation capital of the world, officials were more than a little skeptical. Albuquerque Police Chief E. L. (Whitey) Hansen, asked whether the Maharishi's people might enroll police officers in the program, gave an appropriately wry response: "If there is money involved, they'll have to go before the City Council. We have no funds allocated for levitation."

—*K. F.*

MARTIN GARDNER

Notes of a Psi-Watcher

Freud and Fliess: The Sad Saga of Emma Eckstein's Nose

FOR SEVERAL decades Freud's reputation has been steadily going downhill. One reason surely has been the realization by leading feminists that Freud never rose above Victorian male chauvinism, but the main reason is much stronger. It is the growing awareness that Freud had only the flimsiest understanding of how to test a conjecture. Over and over again he tossed out brilliant guesses; ingenious, yes, but with an absence of empirical underpinning exceeded only by his dogmatic claims of certitude.

On matters for which he is given the most credit, such as the influence of repressed memories on behavior, Freud took over a commonly accepted opinion. You'll find long discussions of unconscious causes of psychosomatic ills in William James's *Principles of Psychology*, published ten years before Freud began to invent his theories. It is where Freud departed from his colleagues that he should be judged, and it is precisely these departures that are coming to be seen, as Karl Popper and Peter Medawar have long insisted, as little more than colorful mythology projected by a neurotic genius. Even Freud's theory of dreams is now under fire, as recent research suggests that dreams may be mostly random by-products of the brain's process of clearing its circuits and that trying to recall dreams may actually harm a patient.

In a chapter of my *Mathematical Carnival* I tell of Freud's strange and passionate friendship with one of the giants of German crackpottery. He was a Berlin nose-and-throat doctor named Wilhelm Fliess—two years younger than Freud, handsome, charming, conceited, paranoid (he later thought Freud was trying to kill him), and utterly irresponsible. It is hard to believe, but for more than ten years he was Freud's most intimate confidant.

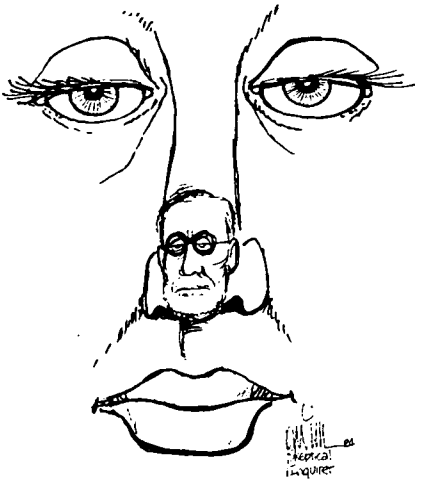
Fliess suffered from two major obsessions. He believed that all living processes conform to two cycles: a male cycle of 23 days, and a female cycle of 28 days. The theory became known as biorhythm, and later his disciples added a third cycle.

Fliess's second obsession was the unshakable conviction that all neuroses and sexual abnormalities are intimately related to the nose. He diagnosed such ills by examining a nose's interior and thought he could cure these ills by cauterizing or applying cocaine to the

nose's "genital spots." Masturbation, for example, altered the "left middle turbinate bone in its frontal third," and this in turn caused stomach pains. In cases of severe symptoms he removed a piece of nasal bone. Young Freud was enthusiastic about both of these great scientific discoveries. At one time he even feared he would die at 51 because 23 + 28 = 51. Several times he allowed Fliess to operate on his nose.

Freud apparently destroyed all of Fliess's letters, but much of Freud's side of the correspondence has survived. His daughter Anna edited a selection of these letters for a book, but she suppressed the letters or passages she considered damaging to her father. These censored writings have now come to light in Jeffrey Masson's explosive new book, *The Assault on Truth*. The book has generated an enormous controversy in newspapers and magazines, including two long articles in the *New Yorker* last December, in which Janet Malcolm drew unflattering portraits of Masson and his chief rival in the debunking of Freud, Peter Swales. Swales's biography of Fliess, *Freud's Other*, will soon be available. Psychiatrists outside the Freudian tradition (they are the vast majority) are reacting with surprise and glee, but the elderly custodians of Freudian orthodoxy are doing their best to minimize the book's impact.

There were two whopping reversals in Freud's early speculations. He stopped using hypnosis when he found it unreliable for gaining access to a patient's real past; and he abandoned his strongly held theory (he once likened it to finding the source of the Nile—that large numbers of neurotic women suffer from suppressed memories of being violently raped by their fathers. Masson argues that Freud did not abandon the second view for scientific reasons but for a variety of unconscious personal motives, and that



a horrendous event involving his idolized Fliess played a pivotal role in this decision.

Freud had a young woman patient, Emma Eckstein, of whom he was extremely fond but with whom he was making little progress. To cure her hysterical symptoms, mainly severe stomach pains, he brought Fliess to Vienna in 1895 to remove the offending bone from Emma's nose. As suppressed letters to Fliess revealed, Freud had full confidence in this crazy operation. When it was over, Fliess returned to Berlin but poor Emma's nose began to hemorrhage. The mysterious, massive bleeding refused to stop, and Masson prints stomach-turning reports that Freud sent Fliess, which read like passages in a horror-fantasy potboiler. Not until Emma was on the brink of death did Freud finally seek the help of a reputable surgeon—a doctor who had strongly opposed the original operation. He opened Emma's nose. Inside, wadded into the nasal cavity, he found half a meter of gauze that Fliess forgot to remove. Freud was so stricken that he had to leave the room and imbibe some booze.

"So we had done her an injustice,"

Freud wrote to Fliess. "[The bleeding] was not at all abnormal, rather, a piece of iodoform gauze had gotten torn off as you were removing it, and stayed in for 14 days, preventing healing . . . how wrong I was to urge you to operate in a foreign city where you could not follow through on the case."

Emma recovered, though disfigured for life because the loss of bone caused one side of her nose to cave in. Although Freud originally attributed the bleeding to Fliess's bungling, he made clear that he considered it one of those unfortunate mistakes that even the best of surgeons sometimes make. A year later, however, Freud had found a better way to absolve Fliess of guilt. He decided that the bleeding was entirely hysterical, springing from the young woman's desire to be loved. This had been Fliess's opinion, which he naturally related to critical days in her 23- and 28-day cycles.

In letters censored by Anna, Freud tells Fliess about his "completely surprising explanation of Eckstein's hemorrhages—which will give you much pleasure. . . . You were right, that her episodes of bleeding were hysterical, were occasioned by longing, and probably occurred at the sexually relevant times (the woman, out of resistance, has not yet supplied me with the dates)."

These "relevant dates" refer, of course, to Fliess's numerology. Emma almost bled to death because she wanted Freud at her bedside! He reports happily on his discovery that Emma had nosebleeds when a child. "As far as the blood is concerned," he assures Fliess, "you are completely without blame!" Masson believes that this attempt to exonerate Fliess, along with other personal matters involving Freud's relatives—not clinical data—led Freud to his new theory that sexual fantasies are more important causes of neurotic behavior than actual episodes (such as Emma's operation) in the past. He thinks this shift of emphasis was damaging to the analytic movement, and he sides with those modern researchers who are trying to move the emphasis back to traumatic events that really did occur.

It took Freud more than ten years to realize that his dear friend was a crank. Fliess was the first to break the bond, accusing Freud of abusing him and stealing his ideas. In my chapter on Fliess you'll find the details of how, many years later, Freud suddenly fainted during a lunch with Jung at a hotel in Munich. He told Ernest Jones (who devotes a chapter to Fliess in his classic biography of Freud) that he fainted because an argument with Jung had reminded him of a violent quarrel with Fliess at the same hotel.

Fliess's mad cycle-theory is still going great guns in the biorhythm movement, now unregrettably fading, but I know of no current boosters of his nasal theory. A quack doctor could make a fortune by reviving it. The background material is readily available, in monstrous detail, in Fliess's untranslated tomes and papers. A popular book titled *The Nose Knows* could outfleece any book on acupuncture. Illustrations showing how bones of the nose connect with the penis and vagina would provide marvelous erotic fare. Plastic surgeons could combine the nose therapy with remodeling the nose to improve the face. After it became a Hollywood fad, NOVA could produce a great documentary on it.

It is hard to know which deserves the stronger condemnation: Freud's childish credulity or the shameful way his daughter, and other guardians of the orthodox analytic flame, have done their best to prevent the lurid facts about Freud's early career from reaching the general public. •

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ROBERT SHEAFFER

Psychic Vibrations

THIS IS POSITIVELY the last incarnation, folks. Don't miss your chance to study with Rama, whose Malibu-based Lakshmi ("A California Corporation," presumably privately held) offers spiritual enlightenment. Rama, who until recently was known as Atmananda, and before that as Dr. Frederick Lenz, has chronicled his experience as a spiritual teacher going all the way back to 1531. Since then, he has been incarnated as the head of a Zen order in Japan (1602-1671), the master of a monastery in Tibet (1725-1804), a Jnana Yoga master in India (1834-1905), as well as a Tibetan Lama (1912-1945). Rama's current incarnation as a "self-realized spiritual leader" began in 1950. His followers claim he can put on a one-man light-show using his aura and cause distant mountains to undulate merely by pointing his hands at them. Among the feats attributed to him by Lakshmi: "While I've seen Rama disappear lots of times, I had never seen him take anyone with him before"; "Atmananda hovered for several seconds and then floated back down to the desk"; "Colors and light streamed around Atmananda in a vivid visual display unlike anything I had ever seen." Don't put it off until a future life—Rama won't be coming back to this plane again.

* * * * *

UFOs seem to have fallen on hard times. J. Allen Hynek's Center for UFO Studies (CUFOS) had to close its Evanston office in 1981, moving much of its mountain of evidence to Hynek's home. According to a story in the *Chicago Tribune*, CUFOS retains only about 2,000 subscribers and contributors worldwide, forcing such budget-cutting measures as disconnecting the much-ballyhooed toll-free "UFO hotline" in 1982. Another thing apparently failing Hynek is his memory. He told a reporter from the *Toronto Globe and Mail* that he had never seen a UFO. He appears to have forgotten his own two photographs of a supposed UFO that appeared in his book *The UFO Experience* and were subsequently published and discussed in the book Hynek coauthored with Jacques Vallee, *The Edge of Reality*.

In the October 1983 *Fate* magazine, crammed full with ads for psychic readers and the like, editor Jerome

Clark wrote "Requiem for the UFO Age." Clark bemoans the fact that

> . . . books on UFOs have stopped selling and publishers have stopped releasing them. The newsstand UFO magazines that flourished a few years ago have all gone out of business. Today media coverage of UFOs—what there is of it—is mostly derisive. (*Newsweek*, which a few years ago compared Hynek to Galileo, recently equated ufology with creationism.) When they mention UFOs at all, spokesmen for the scientific establishment point, with dreary predictability, to the pronouncements of UFO antagonist Philip J. Klass, as if he had settled the issue when in fact serious questions about his methods and conclusions have been raised by both proponents and skeptics.

Clark further complains that recent extraordinary UFO cases, such as the New Zealand UFO films and the Cash-Landrum "UFO radiation" incident, aren't getting the attention they deserve.

Perhaps the "problem" of insufficient interest in UFOs will be solved as soon as the world hears about the latest findings by Walt Andrus, director of the Mutual UFO Network (MUFON), the UFO organization that "keeps the crackpots out" (see *SI*, Fall 1983, p. 20). According to an item in the December 1983 *Omni*, Andrus is dusting off the long-discredited story of the "man from Mars" who reportedly died after his ship crashed into the water well on Judge Proctor's farm in Aurora, Texas, in 1897. (For an account of the story, see Chapter 24 of *UFOs Explained* by Philip J. Klass.) A piece of the supposed spaceship has now been located, according to Andrus, and has been subjected to metallurgical tests proving that it was not manufactured on earth. Unfortunately, Andrus declines to name the laboratory where the testing was done because MUFON had the work done without paying the lab's standard fee, and hence there is no way to substantiate this claim. Skeptic James Oberg suggests that, if Andrus's claim is true, the people of Aurora should, instead of merely collecting money at the gate of the cemetery from people who want to see where the "alien" is buried, dig up the grave and put the body itself on display.

* * * * *

The return of the Yeti: The Wildman Research Association in China reports that it now has hair samples and over a thousand specimens of footprints of this elusive beast. According to a UPI report from Peking, Liu Minzhuang, member of the Chinese Anthropological Society, reports that hairy apemen are

active in 13 of China's 29 provinces. They are most commonly reported in hilly regions in southern China. Despite 35 months of field research by Chinese wildman chasers, the beasts continue to escape unambiguous detection.

In a related development, none of the cryptozoologists who so eagerly set off for Papua New Guinea last year in search of mermaids (or "ri," to use the native term: see *SI*, Winter 1983/84, p. 117) have yet commented on the newest purported discovery of humanoids from the deep: "Human Goldfish Live Beneath the Sea," proclaims *The Examiner*. This amazing discovery is attributed to one Lars Bergstrom, supposedly a "noted oceanographer" of the Helsinki Institute of Marine Studies in Finland. "They resemble fish even more than mermaids do. They have fins and tails, and can live underwater comfortably for long periods of time," he said. While accounts of goldfish people truly defy all attempts at belief no matter how hard one tries, now that mermaids have achieved cryptozoological respectability it would perhaps be too dogmatic to dismiss this account until a proper cryptozoological expedition has been carried out to look into the matter.

* * * * *

If the blahs are getting you down, and not even the newest high-energy diet can pick you up, it may be because you are cursed. So say Drs. Clark and Dei Wilkerson, leading experts on Hawaiian Huna magic and frequent advertisers in *Fate* magazine. Every time you harbor an angry thought about a loved one, or even about yourself, you may unknowingly create a curse, they claim. How can you tell if you have been cursed? As the Hawaiian Chief Kahuna explained one day to Clark and Dei, "If you get hurt in any way, such as a cut finger, bumped knee or leg, an auto accident, sickness or loss of a favorite item, you are cursed." How to get rid of the curse? That's easy: Try the Wilkersons' Decursing Ritual. "Curse Removal Is Our Specialty," they advertise. For the modest fee of $50.00 *for each person to be decursed*, their group of ministers will do a "powerful, godly *decursing ritual* . . . it is actually SEVEN RITUALS in one . . . To our knowledge, *no one* is decursed until they have had a *good decursing ritual* done for them. We guarantee our rituals to be successful within 90 days . . . If your home or business (large or small) is cursed with Earth Bound Spirits, Bad Luck, Misfortune, or even Demons, please write us for further information." •

DON ADDIS

The Lighter Side

Psychic Arms Race? Give Me a Break!

I WOULDN'T SO MUCH mind our president wanting to give $305 billion to the military if I knew it was being used wisely and efficiently. But some items I have noticed in the news lately have me worried that the government may be penny unwise and megaton foolish. We find the Pentagon reportedly has been doing psychic research for possible use in espionage and war, fearing an ESP arms gap between us and the Soviet Union. Apparently Russia has the jump on us in rolling needles across tables without touching them. Give me a break!

"In view of the long, hilarious history of fraud and gullibility in psi research," to borrow the words of Martin Gardner, can the Army Corps of Engineers be far behind?

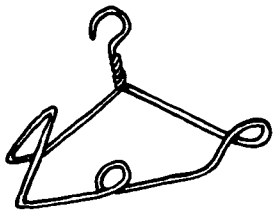
It should be borne in mind that one source for the news report was Dr. Russell Targ, who took part in testing psychic metal-bender Uri Geller's paranormal claims and was convinced by the Israeli magician's parlor tricks. Professional magicians were less easily swayed, finding not much difficulty in replicating Uri's accomplishments by nonpsychic sleight of hand.

Face it. Decades of sloppy and slanted psychic research have failed to put the pickle on the plate. I figure it's a fair field for honest study, but few enterprises are richer in bamboozlers pedaling their psychicals into a plumper gaggle of gulls and geese.

Some eager believers are invincible. In 1976 at the Utrecht Parapsychology Conference, a Swedish amateur magician named Ulf Morling demonstrated some typical psi tricks, announcing before the performance that he claimed no paranormal powers and that his whole act was pure illusion. When he finished, some parapsychologists were so impressed they wondered aloud if Ulf might be a genuine psychic without knowing it. Come, fellas. Either he knows how he does his tricks or he doesn't.

But is the military approach to things delicate enough to handle this area of study? Psychics warn us that results often won't come if the vibes are wrong; if there are nonbelievers present, stinking up the force field with skepticism. I call this the Tinkerbell Effect. (Remember? If you want Tinkerbell to live, you have to clap real hard!)

Uri Geller himself demonstrated the Tinkerbell Effect on a TV program not long ago, imploring viewers to will



along with him that a compass needle should move under his telekinetic influence. I wonder how much the viewers' absent urging could have helped, considering the segment was recorded earlier.

I remember another TV show, in which watchers were invited to test their own psychic powers by looking at pictures of three fish and divining which fish was still alive: "Is it this bright-eyed fish swimming briskly by the camera, this fish floating belly up on the surface, or this can of tuna?" Gullible's Travels.

I suspect in the long run Uri is having his revenge on all the skeptics who question his metal-bending prowess. How else can you account for the fact that every shopping cart in America has wobbly wheels? If not Uri, maybe it's the Soviets demonstrating their first-strike capability.

Easy for me to smart off on the subject, but what if the military's psi research proves fruitful? We can look forward to a very unconventional World War III. We'll have the Clairvoyant Corps, Remote-Viewing Regiment, Divining Division, Astrological Army, Telepathic Task Force, and assorted psychokinetic squadrons. The Amazing Kreskin as head of the CIA? A new TV series called Psi Spy?

We'll deploy intercontinental ballistic mystics and medium-range mediums, or, in a limited conflict, the Lafayette ESPadrille, followed in by psychic-surgery MASH units.

We'll replace the Sixth Fleet with the Sixth Sense, cannon balls with crystal balls, warheads with warlocks, paratroopers with paranormals, mine fields with mind fields, and the Joint Chiefs of Staff with the Ouija board, as we metal-bend our plowshares into swords.

In a way I'm relieved that the military may be branching out into study of the paranormal, even though they'll certainly find a way to make it expensive. How much harm can they do in this area compared to, say, blowing up the Mojave Desert?

On the other hand, the idea of trusting in telepathic warfare is horrifying. When we're eyeball to eyeball with the enemy, I don't want Jeane Dixon's finger on the button. •

Don Addis is cartoonist for the Evening Independent, *St. Petersburg, Florida. Reprinted by permission from the* St. Petersburg Times.

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Parapsychology's Past Eight Years: A Lack-of-Progress Report

The past eight years have been no kinder to the seekers of reliable evidence for the paranormal than the previous eighty. The long-sought reliable demonstration is as elusive as ever and the claims are becoming wilder and less credible.

James E. Alcock

This article and the following one by C. E. M. Hansel are adapted from papers given at CSICOP's international symposium on "Science, Skepticism, and the Paranormal" at SUNY-Buffalo, October 28-29, 1983.

ON THE WEEKEND of April 30, 1976, critics of the paranormal met on the SUNY-Buffalo campus in a symposium entitled "The New Irrationalisms: Antiscience and Pseudoscience." Out of that meeting emerged the Committee for the Scientific Investigation of Claims of the Paranormal (CSICOP). It is now eight years later.

What changes have occurred in parapsychology since that first meeting? Some milestones are obvious: On the human level, the passing of the years has claimed the lives of several of the founders of modern parapsychology: Joseph Banks Rhine, Louisa Rhine, Gardner Murphy, J. Gaither Pratt. Arthur Koestler and Margaret Mead, two of its most important proponents, and the famous Dutch psychic sleuth Gerard Croiset and his mentor, Professor W. H. C. Tenhaeff, all passed away during this period.

The past eight years have also witnessed demises of another sort: Star

James Alcock is associate professor of psychology at Glendon College, York University, Toronto, and author of Parapsychology: Science or Magic?

psychic Uri Geller, once the darling of both the public and parapsychology alike, no longer is considered by most parapsychologists to have genuine psychic powers; this change was brought about in large part by the efforts of James Randi. As for Gerard Croiset's reputation as a psychic sleuth, while it may live on for some years in the public mind, anyone who has read Piet Hein Hoebens's account in the SKEPTICAL INQUIRER about the fraudulent nature of Croiset's claims (vol. 6, nos. 1 and 2) need no longer wonder about his supposed psychic abilities. (Professor C. E. M. Hansel [1966] first put the claims of Croiset and Tenhaeff in doubt eighteen years ago, but Croiset's psychic career continued to flourish.) Lawrence Kusche's book on the Bermuda Triangle, which appeared not long before CSICOP's founding, seems to have taken the wind from the sails of those who disseminated the nonsense about that particular "mystery." Carlos Castaneda's claims about his adventures with a superpsychic Yaqui shaman are now, one would hope, thoroughly discredited in the eyes of any intelligent reader as a result of the investigation by Richard deMille, which he reported in his book as well as in the pages of the SKEPTICAL INQUIRER and elsewhere.

CSICOP and the SKEPTICAL INQUIRER cannot of course take the credit for these "demystifications"; many or all of them would have occurred without CSICOP. However, CSICOP has served to create a sense of community among many critics of the paranormal. By providing an excellent outlet for critical commentary in the form of the SKEPTICAL INQUIRER, and through its efforts to bring attention to the weakness of claims made by proponents of parapsychology and UFOlogy and the generally unfair bias of the media, it has helped bring about an atmosphere that has encouraged significant numbers of people to contribute constructively and critically to the debate about claims of the paranormal.

But what about *progress* in parapsychology during these past eight years? Has any new evidence been forthcoming that puts paranormal psychology on surer scientific ground? The answer here is surely "No." The past eight years have been no kinder to those seeking compelling evidence about the reality of paranormal phenomena than were the previous eighty: The long-sought reliably demonstrable psychic phenomenon is just as elusive as it has always been.

Yet one can sense a certain excitement in the recent writings of some parapsychologists. It is as though something very big is in the wind. Much is made of the supposed compatibility between parapsychological claims and some interpretations of quantum-mechanical theory. For the first time, parapsychologists—some of them at least—are proudly talking of testable theories. Witness, for instance, the recent words of Gertrude Schmeidler (1982):

> . . . back in the 1940s, and even to the 1960s, critics used to say that para-

> psychology gave facts without theory, yet here in the 1970s we have almost an embarrassment of theoretical riches. [These theories] . . . are astonishing because another critical argument used to be that physics showed parapsychological data to be false, both because the data showed no diminution of ESP success as spatial distance increased and because precognition contradicted what we know of time relations—and yet here we find, with modern physics, that both these apparent anomalies fit well into solutions of equations in quantum mechanics. What used to seem major arguments against parapsychology are now only historical curiosities. [pp. 140-141]

That there should be some embarrassment associated with these theories is undeniable, but it is hardly because of their richness. Rather, the embarrassment should come from the unabashed efforts to twist certain features of the theory of quantum mechanics, and to presuppose certain solutions to some of the well-known quantum mechanical enigmas, in such a way as to "make possible" the supposed ability of psychic forces to leap the constraints of both time and space. This process of "quantum mechanization" is followed by trumpeting to all who wish to listen that, rather than being a research area of disputed credibility from the point of view of mainstream science, parapsychology is on the scientific forefront, waging battle shoulder to shoulder with quantum physics to force a reluctant nature to give up its secrets.

Although it is true, as Schmeidler pointed out, that parapsychologists have been criticized on the grounds that their claims are compatible with no known theory, the production of rather contrived theories based loosely on quantum mechanics to "explain" data whose very validity is at the heart of the dispute between critics and proponents is hardly likely to put criticism to rest. Indeed, this brings to mind a letter that appeared in the *Journal of the American Society for Psychical Research* in 1971. In this letter, J. T. McMullan of the School of Physical Sciences at the New University of Ulster in Northern Ireland proposed a theoretical explanation, based on thermodynamics, to account for the energy expended during poltergeist activity. He noted that poltergeist reports are consistent in their mention of a lowering of the room temperature by as much as five degrees Celsius during a poltergeist display. He then calculated that enough energy would be given up by a one-degree lowering of room temperature in a room of normal size to raise a 25-kilogram table vertically through a distance of some 200 meters. Thus, he suggested, the energy required for the spectacular movings and jarrings of objects that typify a poltergeist incident can be accounted for by means of what is already known and accepted about the conversion of energy from one form to another. Would it be in consequence appropriate to say that thermodynamical theory predicts, allows for, or is compatible with the occurrence of poltergeist activity? Obviously not, although were one to do so this would no doubt, in many eyes at least, lend scientific credibility to poltergeist claims. (Even

parapsychologists have not been responsive to McMullan's notions.) However, McMullan cannot be faulted for his creativity; were one able unambiguously to verify the non-normal nature of putative poltergeists, and were one about to verify temperature change, then McMullan's speculations might be of some interest. Without a clearly demonstrated phenomenon, and without, in consequence, the need to try to account for its occurrence, the proposition is little different from medieval arguments about the number of angels that can dance on the head of a pin. Demonstrate that the accomplishments of poltergeists occur without benefit of natural cause, show that the temperature really does change, or verify the presence of at least some angels, and then one is in a position to seek or propose explanation.

If parapsychologists showed so little interest in McMullan's ideas, why, then, should anyone be excited by the so-called paraphysical theories, which depend on some controversial (to say the least) interpretations of quantum-mechanical theory to explain data whose very validity is in serious question? The answer lies, I believe, in the fact that, while it might be quite difficult for many people to accept that a small decrease in temperature can produce enough energy to toss a chair around, it is much easier to believe that very subtle psychic influences can affect things on a subatomic scale to create subtle influences on large-scale events, influences that can only be determined statistically.

It is hardly contentious to say that the strongest parapsychological data claims are intimately tied to statistical analyses. Apart from such analyses, the only other evidence is either anecdotal or of a case-study nature, and neither of these sources has proved capable of producing evidence of any weight. Indeed, it is safe to say that parapsychology emulates experimental psychology's preoccupation with statistical *significance*, to the point of all but ignoring the size of the actual effects. During the 1930s and the 1940s, experimental psychologists engaged in lengthy debates with parapsychologists about the appropriateness of statistical models and tests used by the latter, in the belief that parapsychological evidence was merely the outcome of misapplied statistical tests. These battles did lead to improvements in the quality of statistical analyses used within parapsychology, and gradually the psychologists broke off their attacks based on that ground. In fact, it can now be argued that, if one looks at the *best* research that modern parapsychology has to offer, the quality of the statistical analysis is often as good as or better than much of what appears in psychological journals. However, there is a very crucial difference between psychology and parapsychology in this regard: Psychologists run *experiments*, by which term they mean that they vary an independent variable and look for concomitant changes in a dependent variable; in other words, they employ control groups. For example, one might randomly assign subjects to one of two groups and then go on to

treat the two groups identically except for the varying of the independent variable. If in consequence it is found that statistically significant differences exist between the two groups, one can then infer that the differences are due to the independent variable, since it was the only thing that differed in the treatment of the two groups. Parapsychologists are unable to study directly their putative psi in this way, since they have no way of treating it like an independent variable because they have no way of turning it on or off, or even of knowing whether it is in operation at any specific point in time during the study. Unlike the psychologist who can contrast two groups of scores, the parapsychologist must argue his/her case on the basis of departures from a chance model said to describe the population from which the data arises. This imposes severe limitations on the extent to which one can draw inferences from the statistical conclusions.

At the risk of again being accused of belaboring the obvious, I want to emphasize that statistical conclusions cannot say anything at all about the existence or nonexistence of psi. All one can gain from statistical procedures is an indication that the observed results are unlikely to have been observed by chance, as described by the particular probability model being used. Unfortunately, despite claims to the contrary, parapsychologists routinely interpret statistical departures from "chance expectation" as evidence that psi is involved. Sometimes the attempt is made to argue that "psi" is just a label to describe the departure from chance and that no particular explanation is implied. This claim is demonstrably false, and all one has to do to establish that is to turn to the parapsychology research journals to see how departures from chance are typically interpreted. They are indeed treated as manifestations of psychic forces. An alternative explanation of the same departures might be that one is using an inappropriate model or that some unrecognized "normal" influence may be responsible for the departure of the data from what the model would predict. To decide that this unrecognized influence is a "psychic" influence is no more logically compelling than to decide that invisible creatures from another solar system are hovering in the laboratory and causing the observed departures from chance.

Some of the new directions parapsychologists have been following strengthen my belief that there indeed is nothing "psychic" about the departures from chance. For the sake of argument, let us suppose that *all* departures from chance reported by parapsychologists are due, not to psi, but to something I shall refer to as "empirical/statistical artifact," or simply "artifact" for short. By this term I simply mean to describe statistical departures from chance expectation brought about by not only the vicissitudes of chance (as manifested in such things as subject selection, selective publishing, and statistical Type Two error, or false rejection of the chance hypothesis when it is true) but all subtle influences that can lead to bias in

a probability experiment. This may include sensory leakage, recording errors, experimenter expectancy, or whatever. This "artifact hypothesis' would suggest that departures from chance should be expected not only in the classic sender-receiver telepathy paradigms, or the old dice-rolling PK studies, but in some subset of all situations in which subjects are attempting to alter statistical outcomes. Of course the more tightly controlled the research situation, the fewer the sources of artifact, and thus the fewer the observed departures from the chance model. Since empirical as well as statistical artifact is involved, one is not protected from this problem by the statistical analysis itself. (Artifact turns up, of course, from time to time in "normal" science; it is through the use of such measures as control groups, when relevant, and through the demand that findings be replicable by neutral others that makes artifact only a minor problem in that domain.)

Thus, for example, if "sensory leakage" were not involved and if we were to attempt to match up subjects' calls in a card-guessing study in which, unbeknown to the subject, the cards were all turned yesterday, we should observe significant effects with the same frequency that we observe them if the cards are turned over only after the order of the entire deck has been described, or even if the cards are turned over two years hence. It should make no difference whether the cards are turned over in Moscow and the agent is in New York, or whether the sender and receiver are just next door to each other. Yet this is just what seems to show up in studies of psi: The independence of psi effects from considerations of time and space are well known, and only rarely questioned, within parapsychology.

By itself, this artifact hypothesis offers nothing new; it merely represents the viewpoint of all those critics who believe that empirical parapsychological claims are based in error of some kind rather than in psi. What I do wish to offer as new, however, is the proposal that recent trends in parapsychological research, which on the surface would seem to build to even greater heights the wondrous capabilities of psi, actually *weaken* the psi interpretation and give more credence to the notion that so-called psi effects are due to artifact. For example, when Rex Stanford can state, as he did in the *Handbook of Parapsychology*, that:

> In short, PK success does not depend upon knowing the PK target, upon knowing the nature or existence of the REG [random event generator], upon knowing one is in a PK study, upon the complexity or the design of the REG, or upon subjects knowing anything about the mechanics of the REG. These findings are highly consistent and appear in different forms throughout the PK literature. [1977, p. 341]

then, rather than adding to the case for psi; this seems to me to add support to the artifact hypothesis. That is, nothing unusual is going on and the observed departures from chance are due to unmeasured biases in

the situation as well as to the vicissitudes of chance itself. Similarly, recent evidence suggesting that people apparently are capable of succeeding in psi tasks even when they are totally unaware that psi is involved in the study (e.g., see Palmer [1978]), and the apparent capability of some subjects to successfully shuffle decks of cards so as to have the final order statistically match a concealed target (e.g., see Morris [1982]) also are in line with the artifact hypothesis.

Even more support for the artifact hypothesis is forthcoming when one considers one of the newest areas of excitement in parapsychology, that of retroactive psychokinesis: The so-called observational theories of Schmidt and Walker predict that random events can be affected by the simple fact that the outcome is being observed by people, even if those people only observe it at some future time (e.g., see Bierman & Weiner [1980]). This has led to studies in which, for example, several sequences of tones, whose presence or absence during successive one-second intervals is determined by a random-event generator, are tape-recorded on separate tapes. At a later time, subjects are given a randomly selected tape to listen to and asked either to try to keep the tone on or to try to keep it off. The tapes are then analyzed to see whether or not the proportion of tones departs from what would be expected by chance. In some studies, tapes given subjects asked to keep the tone on have apparently contained significantly more tones on than those of the subjects asked to keep them off. This has been taken to suggest that the subjects' influence extended backwards in time so as to affect the original recording process. (Morris [1982] and Schmeidler [1982] have independently suggested that it is also possible that the experimenter used psi to select those tapes that varied above the chance expectation and gave them to the subjects in the "tone on" group. This would "explain" the observed results without need of backward influence in time.) In a related vein, there is the so-called checker effect, which describes the apparent possibility that ESP scores might be influenced retroactively by the person who checks or analyzes the data (Palmer 1982).

One could go on and on in citing parapsychological claims that strain credulity: e.g., Helmut Schmidt's (1970) finding that cockroaches were apparently able to influence a random-event generator in such a way as to cause them to be shocked more often than would be expected by chance led Schmidt to suggest that perhaps it was his own psychic power that, because of his dislike of cockroaches, led to the observed effect. As a psychologist, I would have more readily opted for an explanation based on psychic masochism!

I hope that by now my point is clear: The more that parapsychologists report evidence of new statistical departures from chance that suggest new and *wilder* psychic effects, the *less* credibility their claims should have. If artifact is responsible for the reported deviations from chance in the classic

psi experiments, then we should expect that similar statistical procedures carried out on data gathered in similar circumstances (i.e., by comparing two sets of scores, one generated by subjects, another generated by some chance process), by researchers with similar degrees of belief in the putative phenomena being studied, should at least sometimes produce similar significant effects. The finding that psi effects turn up whether one uses cockroaches or college students, whether the effects are to be generated in the present or the future or the past, whether the subjects know that there is a random generator to be affected, whether a sender and receiver are inches or continents apart—this *generalizability* of psi to, it seems, almost any situation in which one matches subjects' scores against a list—weakens rather than strengthens the case for parapsychology.

What I attribute to artifact, parapsychologists in effect attribute to psi. Their term then leads them to interpret their data as supporting psychic beliefs. If parapsychologists wish to argue that "psi" is more than "artifact," then the first thing they should do is to inform us as to what conditions, or what tasks, *never* give rise to extra-chance effects. In other words, when does this so-called psi *not* manifest itself? To respond that this occurs when controls are too rigid, or when the experimenter is too skeptical or too emotionally "cold," is not satisfactory.

Conclusion

Despite the enthusiasm for the new "quantum mechanical" theories, nothing of substance has occurred in parapsychology in the past eight years. The same old reasons for skepticism—the lack of public replicability, the problems of defining just what it is that "paranormal" signifies, the circular reasoning inherent in explaining departures from chance in terms of a "psi effect," the unfalsifiability that enters the picture whenever it is suggested that the experimenter's own characteristics or even his/her own psi or lack thereof may prevent him/her from ever observing psi, the failure of a century of research to improve the evidence—are as strong arguments against the psi position today as they were in the past. A new reason for skepticism is that, no matter how wild the hypothesis may seem, statistical evidence can be adduced that supports the claim; this suggests that artifact rather than "psi" is the most probable explanation for the statistical deviations reported in parapsychological research.

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The Evidence for ESP: A Critique

A basic requirement of science is that a demonstration of some new process should rarely fail when other investigators try to verify it. This requirement has not been satisfied in parapsychology. Hence some conclusions can be drawn.

C. E. M. Hansel

WHEN CONSIDERING the subject of the evidence for parapsychology, I assumed that this *evidence* comprised what has been published in the form of experimental results, consisting essentially of scores obtained during guessing experiments. It is then necessary to consider whether this evidence can provide proof for the existence of the various hypothetical processes postulated by parapsychologists.

Both the experimental results and the supposed phenomena have changed in nature over the years. Back in 1882, a committee set up by the Society for Psychical Research (SPR) was interested in thought transference from one person to another. Since then the range of abilities has increased until amost any conceivable process that appears to be inconsistent with contemporary scientific theory is likely to be included in the repertoire. At the same time, the range of organisms claimed to possess these abilities has increased to include not only humans but horses, cats, mice, cockroaches, chicken eggs, and plants.

A fundamental feature when considering any ability is its distribution in the population. When John Dalton reported red-green color-blindness in 1794, he gave figures for its incidence in his students that are remarkably

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consistent with values accepted today. But the distribution claimed for ESP after a hundred years of investigation varies with each investigator. In the thirties, J. B. Rhine, after more than five years of research, came to the conclusion that some ability was present in at least a fifth of the population of Durham, North Carolina. In addition he found it to be present in almost every psychology student that he tested. Investigators in five psychology departments, who used Rhine's tests with very large samples following the publication of his *Extra-Sensory Perception* in 1934, found no ability to score at above the chance expectation level.

In England S. G. Soal, repeating Rhine's work between 1934 and 1939, found scoring at only chance levels after testing 160 subjects. These included students, professional clairvoyants, and mediums. He also tested Eileen Garrett, a medium who had produced remarkably high scores when tested by Rhine three years earlier, and got only chance results. Thus experiments at that time appeared to indicate that subjects could not score above the chance level unless they were tested in Rhine's laboratory, and they confirmed contemporary ideas in psychology that sensory information is necessary for perception.

Following a general tightening up of experimental procedures at Duke, high-scoring subjects became difficult to find. By 1938, the Pratt-Woodruff experiment, proclaimed by Rhine to be the most carefully controlled experiment in the history of science, produced only one high-scoring subject among the 32 tested. The group as a whole scored only one extra hit in each 200 trials.

In the 1940s, following the disappearance of high-scoring subjects, the emphasis was on group experiments. But even these presented difficulty until a new type of experiment providing a new source of experimental error appeared on the scene. Here a large sample of subjects was divided into two categories, called "sheep" and "goats," and a comparison was made of the mean scores from the two subgroups. Often a difference was found, but the overall score after combining scores from the subgroups—rather in the manner of Burt and Thouless—was at only chance level.

In more recent times a massive survey of the population in Britain carried out by the SPR failed to find a single individual who could consistently score above the chance level. But in the United States, after throwing experimental precautions to the wind and returning to a single experimenter plan, Helmut Schmidt appears to have no more difficulty finding subjects than did Rhine in his heyday. Other investigators, after dropping the use of Rhine's five symbols and returning to techniques reminiscent of the early days of the SPR, appear to have no difficulty finding suitable subjects.

Some years back Rhine suggested that the whole mass of experiments considered in toto indicate the existence of ESP. While disagreeing completely, I would suggest that facts can be established by looking at the

mass of evidence, but these facts are more likely to indicate the absence of any paranormal process than to demonstrate the existence of any.

Most people who have studied the experiments would probably agree on the following facts, which are well documented in the literature: (1) High scores have been obtained in some investigations that make it almost certain that something is causing them to arise. (2) There is a high incidence of trickery on the part of those taking part in the experiments. (3) Some experiments for which the most ambitious claims have been made contain elementary faults in design, in execution, and in the experimental report.

Consider two important features of experimental work in science: (1) *repeatability;* (2) the use of *control series.* These assume particular importance where the conclusion drawn from an experiment arises from a statistical analysis of the data.

The conditions under which it becomes possible to demonstrate the existence of a phenomenon have been stated by R. L. Fisher as follows: "We may say that a phenomenon is experimentally demonstrable when we know how to conduct an experiment which will rarely fail to give a statistically significant result."

When an experiment is repeated in order to check its findings, the new investigators are likely to tighten up the experimental conditions if they consider any possible source of error to be present. In these circumstances, if a phenomenon is real it rapidly becomes established. But, if the result is not confirmed, it will rapidly be rejected. The original result may then be attributed to a weakness in the design that was eliminated in the second experiment. Thus failure to confirm the original result may provide evidence to indicate its cause.

Alternatively, the effect of a new precaution can be determined by carrying out an experiment in which the new feature is present in the experimental series and absent in a control series, the two series being similar in all other respects.

At Stanford University in 1915, J. E. Coover carried out an extensive investigation of telepathy in which 105 guessers and 97 senders took part. Ten thousand trials were made in which the guessers attempted to guess the identity of items in a pack of 40 playing cards, the picture cards having been removed. Before each run of 40 guesses a die was thrown to decide whether the sender should look at the cards during the run—making telepathy possible—or merely put the card aside without looking at it, thus making telepathy impossible. These latter runs constituted a control series for comparison with the experimental series. Coover found no appreciable difference between scores in the control and experimental series and concluded that no evidence had been provided for telepathy.

It was later claimed by Burt and Thouless that the total combined score of the experimental and control series had odds of about 200 to one against arising by chance. For Coover, the use of a control series ensured

that the effects of small sources of error common to the two series would be canceled out. Burt and Thouless were claiming that clairvoyance rather than error was operating in the control series and responsible for any above-chance score.

Rhine later claimed that subjects in his laboratory scored as easily under clairvoyance conditions as under telepathy conditions, thus making a transmitter redundant and a control series, as used by Coover, inappropriate.

With the emergence of clairvoyance, a control series in which the possibility of ESP was eliminated might have been possible by shuffling the pack of targets after the guessing had been completed; but Rhine found that high scores were still obtained and attributed this to precognition.

It is of interest that one investigator more recently dispersed with both the sender and the receiver. He merely compared two sets of tables of "random numbers" and claimed to get significantly above-chance scores. Koestler, Hardy, and Harvie attributed this effect to some new principle of "synchronicity" operating in nature. Others might deduce that it indicated the possibility of error when a single person has to check through two lists of numbers each containing 60,000 items.

The main use of a control series is to determine the effect on the result of some possible factor. The parapsychologist seeks to design his experiment so that all known factors that could cause high scores to arise are removed. If any known process can account for the result, it is unnecessary to invoke ESP. To incorporate a control series in which the possibilities of the experimenter being lax or cheating are removed may be achieved by tightening up the conditions; but this is unlikely to be done if the experimenter is a fraud or even anxious to keep on getting results. If, however, a further experiment is conducted by another investigator, he may attribute any failure to confirm the original result to removal of a source of error, and he may deduce the nature of that error from the difference in the experimental conditions between the control and experimental series.

Some interesting features arise when looking at the whole mass of ESP experiments and noting the effects of changes in procedure that may be regarded as acting to produce a control series in this manner. In some cases the data from a single investigation are sufficient. Such an example arises in the case of the Turner-Owmbey experiment, at one time considered by Rhine and his collaborators as one of the eight crucial experiments providing evidence for ESP.

Ms. Turner was guessing symbols generated by the experimenter, Ms. Owmbey, who was 250 miles away. There were five different possibilities at each guess; and each day, according to the report, independent records of 25 targets and guesses were sent to Rhine by the two women.

For the first three days scores were 19, 16, 16, giving odds against chance occurrence that were enormous. It is clear that something was responsible other than chance. Then, on the following five days, scores dropped to around the chance level (7, 7, 8, 6, 2). But it had been disclosed by Rhine when the experiment was in progress that during the first three days the list of guesses had been sent by Turner to Owmbey instead of directly to Rhine, and that Owmbey had the chance to amend her list of targets before passing it on.

Further similar tests with another subject carried out by Owmbey produced only chance scores throughout. This second subject had obtained consistently high scores in other ESP tests with the same experimenter when he was situated a few feet away.

Thus the presence of a loophole that permitted cheating to take place in the first experimental series gave high scores that were not present when the source of error was removed in the control series. It will also be observed that the second subject, who could obtain high scores under Rhine's usual lax conditions, was unable to do so when situated 250 miles away and when the possibility of error was reduced.

A further case arises from an experiment reported from Maimonides Dream Research Laboratory. Here an attempt made to identify targets from the reports of a subject following dreaming episodes was stated to give odds around 10,000 to 1 against chance occurrence. Two repeats of the experiment, in which a further outside investigator took part who imposed his own safeguards on the experimental procedure, failed to give a result significantly above chance. If these two repeat experiments are regarded as a control series in which a possible loophole was removed, and the original experiment is regarded as the experimental series in which the loophole was present, then it might be deduced that the result of the first experiment was due to the loophole in the original conditions.

An interesting example arises in the experiment on Uri Geller carried out by Targ and Puthoff and reported in *Nature,* where Geller made 10 attempts to guess the face-up on a die after it had been shaken inside a box. In 10 attempts he passed twice and obtained 8 hits in the remaining eight trials. The fact that Geller passed on two occasions is of interest, since parapsychologists in general have assumed—without seeking much experimental evidence—that their subjects are unable to say whether they are right or wrong when making their guesses.

Although these tests were made in the early part of Geller's stay at the Stanford Research Institute, no further tests were made to confirm the result. Since it is difficult to believe that Targ and Puthoff could have terminated their tests after making ten trials with a result that surpassed anything achieved since the heyday at Duke, it would seem likely that Geller would no longer take part following the imposition of some extra experimental precaution. Thus it would seem likely that the investigators

were more interested in publishing positive results than in finding out what was going on in their experiment.

In remote-viewing experiments with Geller reported in *Nature,* the results of 13 tests were reported. In all but three of the tests (Nos. 5, 6, 7), the targets were known to the people taking part in the experiment and present during the tests. In experiments 5, 6, and 7, however, an outside person prepared the drawing and it was revealed to no one else until Geller completed his drawing, Geller "passed" on all three of these tests. Thus it seems that withholding knowledge of the target's identity from persons who could have passed on the information to Geller removed his ability to perform. In three other tests the drawings were prepared by outside persons, but they were revealed to the investigators during the course of the experiment. In these three tests Geller was "successful."

Around 1938, following discussions between parapsychologists and psychologists concerning conditions required in ESP experiments, Rhine started using two experimenters who each ensured—or were meant to ensure—that the other experimenter could not affect the result. While this is desirable, it is not sufficient in itself to prevent fraud. In the United Kingdom, Soal quite clearly was able to cheat in spite of the presence of a second experimenter—Mrs. Goldney. In fact on the one occasion when he was seen to be cheating by an observer, this was kept quiet by the second experimenter and reported only following some pressure to do so twenty years later.

In the Pratt-Woodruff experiment, Rhine's "stringent" experimental conditions were insufficient to stop one of the investigators using trickery had he wished to do so. Similarly, in the experiments on mice culminating in the dismissal of the main investigator from his post, the presence of one cheat among a group of investigators escaped notice until the results of 12 experiments had been published. Thus an essential feature of a repeat experiment is that new investigators and none of the previous investigators take part.

Today card-guessing as employed by Rhine has been largely dropped. At the same time experiments have become more complex, less well controlled, and in some cases conducted by a single investigator. When an experimenter carries out a series of tests until he has consistently obtained significant results with very high anti-chance odds, the position is clear-cut: If, as he claims, his experiment is foolproof, then either he has demonstrated some new process that others should be able to confirm or else it is extremely likely that he is either incompetent or fraudulent.

A difficulty arises when considering Rhine's claim that only experimenters who believe ESP to be possible obtain results and that failure to obtain results by the critical investigators is not due to their care in carrying out the experiments but to some inhibitory effect that they have on the process in question. If this is so, the experimenter becomes part of

the experiment and he has to be controlled by other investigators. With present-day computer-controlled techniques, there is no difficulty in doing this and at the same time keeping the critical investigators well away from the scene of the experiment; but no attempt appears to have been made to do this.

One further investigation that should be mentioned is the Veritac series, carried out by five investigators for the U.S. Air Force. Here care was paid to the design of the experiments. The procedures of generating targets and recording subjects' guesses were automated. Tests were carried out for telepathy, clairvoyance, and precognition with groups of subjects who were classified as "sheep" or "goats." No evidence was found in the groups as a whole or in any individual subjects for any of the paranormal processes. The investigators state that at the start they were inclined to believe in ESP and were mainly interested in finding out more about it.

The failure to provide a satisfactory demonstration of any parapsychological process confirms the long-established belief that in the absence of information via the senses perception does not take place. Were it not for the misinformation provided by the media for the general public, there would be little point in paying attention to the claims of parapsychologists until they produce a repeatable demonstration. •

The Great $110,000 Dowsing Challenge

A dowser claimed to be able to determine the on-off status of an electronic circuit in a randomizer device. Tests revealed auditory and visual clues.

James Randi

IN MID-AUGUST 1983, a letter was received by Dick Smith of Sydney, Australia, from Robert A. Homer of Worcester, England. The writer, organizer of the Worcester Dowsers, revealed that an especially gifted practitioner of that doubtful art, a young student named John Rainbow, had performed a startlingly positive test on videotape and that a copy of that tape was on its way to Smith for his viewing. Said Homer, "I am sure that we are making ESP history." And, indeed, if his claims were correct, that would certainly be true.

Homer had constructed a simple randomizer device mounted in a small box. A 500-ohm resistor was connected to the bottom of the box, and the electronic circuitry delivered a very small amount of current to it in pulses occurring a few times a second. This on-off-on-off action could be viewed on a sensitive meter located on the face of the box by depressing a "read" button, which in its normal position was supposed to short out that meter. After the circuit had been switching for awhile, Homer would activate a "freeze" switch that would hold the circuit either on or off while the dowser tested it with his powers.

Rainbow merely waved a small jeweled pendulum near the resistor

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James Randi, magician and challenger of paranormal claimants, is the author of Flim-Flam!

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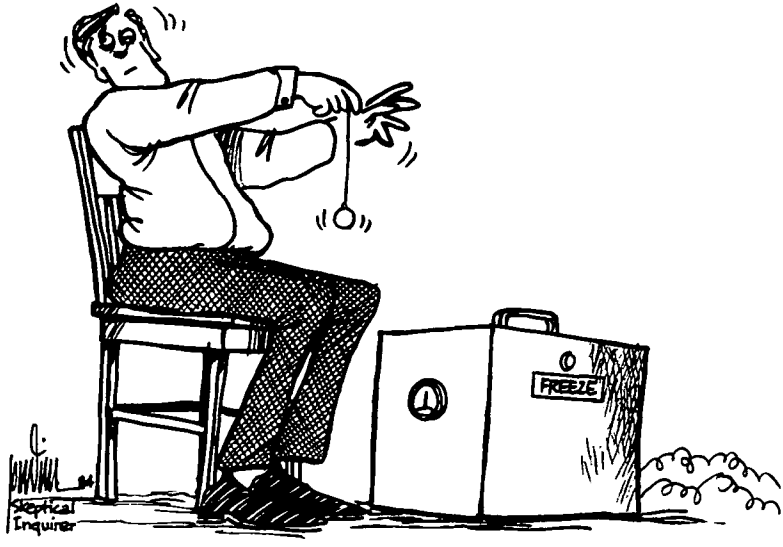
and apparently, by watching the movements of that pendulum, was able to determine whether the current was on or off. Homer invited Dick Smith to view this wonder in person and to surrender his offer of $100,000 upon seeing a successful demonstration.

The videotape arrived in due course, and Smith was amazed to see that Rainbow had beaten the odds of over a million-to-one, calling twenty out of twenty trials correctly! He had reserved the option of refusing to try guessing on any trial by declaring "Void" if he wished to.

Smith immediately called me and asked if I would go to the United Kingdom in his place to see this demonstration. He offered to pay my expenses for the trip. After seeing the videotape, I agreed. He forwarded his bank draft for $100,000, to which I added my own $10,000. I enlisted the help of Carlos Alonso to record the event and Michael Hutchinson (of the U.K. CSICOP) to make all arrangements as well as to witness the tests. We contacted Julian Isaacs, a prominent U.K. parapsychologist, to act as an impartial witness, and the date of the test was set for January 8, 1984.

My viewing of the videotape had aroused my suspicions about certain aspects of the test, and I had alerted Dick Smith to that fact. But suspicions are little if not proven, and I had to await my actual visit in order to test out my theory. I will not go into details of those suspicions, since the modus operandi at the formal tests turned out to be entirely different from what I might have expected. I found that the original box had now been painted and that a handle had been added. Furthermore, any notion



that I might have had about there being any trickery employed in the box was negated by Homer's opening declaration to me—he offered to give me the randomizer as soon as the test was completed.

Homer had intended to hold the test in the living-room of Rainbow's home. I refused this, believing that I would have better control of matters on neutral ground. I chose to perform the test in a local hotel in the town of Redditch. It took us a few minutes to get organized, and after Homer and Rainbow had signed a document agreeing that all was suitable for the actual experiment (Homer asked that Rainbow be allowed to sign *after* the test, but I refused), I asked Rainbow to perform a preliminary unofficial run. This consisted of 10 trials. These were to be followed by the 20 formal test trials, on which Rainbow was required to obtain at least 80 percent, or 16 out of 20 correct. Chance for his success at this level was about one in a thousand. As in his videotaped test, he was to be allowed to declare any trial a "void," and that one was to be ignored in the scoring. I was the scorer, while Isaacs watched over my shoulder.

Homer switched on the randomizer and depressed the "read" button temporarily to show that the oscillator was working. Then, after a pause, he threw the "freeze" switch. He then asked Rainbow to make his guess. The dowser sat concentrating and waving his pendulum while sitting well back from the resistor, unlike his position in the videotaped session. He called two "voids" during this run. Due to my recording error (I entered one "void" in a space reserved for actual guesses), only nine trials were done in this preliminary run—but Rainbow scored 100 percent!

But all was not well, for Isaacs had noted, with some puzzlement, that after the first three guesses I began writing down my own guesses—correctly—before Rainbow called out his!

We had called attention at the very outset to a few points that had not been apparent from our viewing of the Homer videotape. First, the rate of oscillation was about 3 to 5 times per second, not at all a sufficiently rapid rate for such a device. Second, there was no assurance that the relay was off for exactly the same period of time that the relay was on, and Homer had not done any large-scale runs to test it for 50/50 off/on efficiency.

The third problem was much more serious. The tiny reed-relay in the box was quite audible to all present, though Homer denied that he could hear anything. It was making pinging and ponging noises as it oscillated from off to on. By listening carefully to that noise, a skilled operator could have been able to note at which position (ping or pong—off or on) the "freeze" switch had been thrown. To get around this possibility, we rapped upon the table while the device was oscillating and left it in that condition long enough that it would not have been possible to "time" the oscillations.

At the conclusion of that startlingly successful run by the dowser, I

asked to use the pendulum; and, sitting in Rainbow's chair, I called out ten correct guesses with the same precautions of rapping the table, etc., being applied. I had noted that the meter needle "froze" in a position just slightly (about 1/64") below the zero point when the circuit was off, and the same distance above the zero point when it was on. The "read" button was somewhat less than the electrical short it was supposed to be and offered a certain resistance across the very sensitive meter. By simply glancing at the meter needle, I was able to score 100 percent, and I asked Isaacs to sit before the machine to try his skill in this way. He, too, was 100 percent successful.

The question at this point was whether Rainbow had been using this method to make his guesses or had been using supernatural dowsing powers instead. As we considered this matter, Isaacs took exception to the fact that I had not stopped the proceedings immediately upon noting this feature of Homer's device. I asked him to defer to me in the protocol of the test, and he did so, somewhat unhappily. But I had good reason to act as I did.

To have simply stopped the test would have served less purpose than to allow it to continue. I wanted to observe Rainbow to see if he was actually looking at the meter. What I discovered was quite informative.

At this point in the procedure, I asked Homer to open his box so that we might verify that the circuitry was the same as that which he had submitted to Dick Smith. He was somewhat annoyed at this and subsequently expressed his feeling that his character was being impugned by this action. But I was in charge of $100,000 of someone else's money, as well as my own $10,000, and I was not about to leave anything undone.

We suggested to Rainbow that he now perform the run of 20 formal tests—but with the meter covered over. He announced that he was uncertain, tired, and rather rushed. Homer sympathized with Rainbow's reluctance, objecting that all this was not in accord with the original test procedure and that we were casting aspersions on Rainbow by acting as we did. However, at Isaac's urging, the two agreed to do the run. I now surrendered both prize checks to Isaacs, either to be awarded by him to Rainbow if the test was a success or to be returned to me if not.

With a simple slip of paper covering the meter face, the run of 20 took place. John Rainbow scored 13 out of 20, well within chance expectation. Isaacs returned the two checks to me, and the test was over.

The question remains: Did John Rainbow cheat by noting the position of the needle, which gave away the state of the circuit? Certainly he could have. One fact I have not revealed: On the third trial of the preliminary run, with the meter fully exposed, I had entered, in view of Isaacs, a "V" for "void" just before Rainbow called it out. I had noted, and continued to note, that he always hunched forward a bit toward the box just after the "freeze" switch was thrown, ostensibly to see if it was in the correct

position. He then spent quite some time fiddling with the pendulum at a distance from the box, finally making his announcement. But I believe that he was actually getting a glimpse of the needle, which I could clearly see from where I was, above the box, but he could not easily see from his sitting position—unless he hunched forward. When I noted that on this third try he did not attempt to get a close look, I suspected he would announce a "void"—and he did.

The audio-tape record reveals that Rainbow mumbled a great deal during the successful run, asking about the state of the switches and complaining about his pendulum being tangled. All of these ploys would enable him to get a peek at that meter—except when he chose not to, and then he declared a "void." I also find it difficult to believe that Robert Homer designed, built, experimented with, and had that contraption in his possession for more than two years and never knew that it not only audibly "talked" by means of its relay but also showed quite clearly what the state of the circuit was by the position of the meter needle.

It is also very significant that when the table was rapped to get around the possibility that the meter sounds revealed the answer, and the meter was covered to similarly guard against the very plain visual clues, John Rainbow's performance on both tests dropped from 100 percent to chance level. But perhaps, to be charitable, we can grant that Rainbow never noticed the clues.

There is one way to find out. That would be to repeat these tests, using a simpler device. I suggest that we use simple coin-toss in another room to direct an experimenter to switch on or off a simple battery-wire-resistor circuit. Thus there will be no conceivable way, short of exceedingly sophisticated electronics and/or collusion, that Rainbow would be able to obtain his claimed success rate unless he actually has the ability to dowse.

Shortly after the failed test, Robert Homer compiled a lengthy list of excuses for John Rainbow's not being able to collect the $110,000. Homer said there were tape-recorders running. He complained that I "should just have quietly covered over the meter with [my] hand" rather than putting a piece of paper on it. (And continued to record results?) Homer continued, "The color and pattern of the table cloth were confusing . . ." Rainbow, he said, had problems with his pendulum, "making sure the thread suspension of the bob was exactly in the center . . ." There were "delays" and "distractions," claimed Homer. Well, one thing has been forgotten: John Rainbow operated 100 percent with the tape-recorders running, the table cloth, the stubborn pendulum, and all the delays and distractions—until the means of observing the state of the circuit directly were removed. Then, he failed.

I look forward to a further formal, definitive test of John Rainbow's dowsing ability. Both prizes—Smith's and mine—are still available. •

Sir Oliver Lodge and the Spiritualists

The history of Lodge's involvement with the paranormal carries lessons for those who assume that scientific expertise alone is sufficient for avoiding traps set by the need to believe.

Steven Hoffmaster

ONE OF THE major characteristics of science is its continual change, the ability to be self-corrective in the long run and to constantly increase in precision and application of theory. Considering pseudoscience in general and ESP in particular, when one wades through the verbiage one finds such progress largely missing.

An excellent way to show this is to discuss the spiritualist movement of the late 1800s and early 1900s. Many of the current fields of research were active fields of research then. Although the apparatus used has become significantly more sophisticated, the results have not become more impressive. A detailed critique of ESP research is beyond the scope of this article. I will attempt to describe one of the many influential participants in the spiritualist movement, Sir Oliver Lodge. By so doing, I hope the reader will obtain a better historical context in which to judge the issues and claims of modern ESP and also to perceive some of the difficulties of accepting such paranormal claims.

The Fox sisters are generally credited with starting the current revival of the spiritualist movement. In 1848 in the farmhouse of John D. Fox in Hydesville, New York, unusual noises were heard by Fox and his wife. These noises eventually became known as "rappings" and were witnessed

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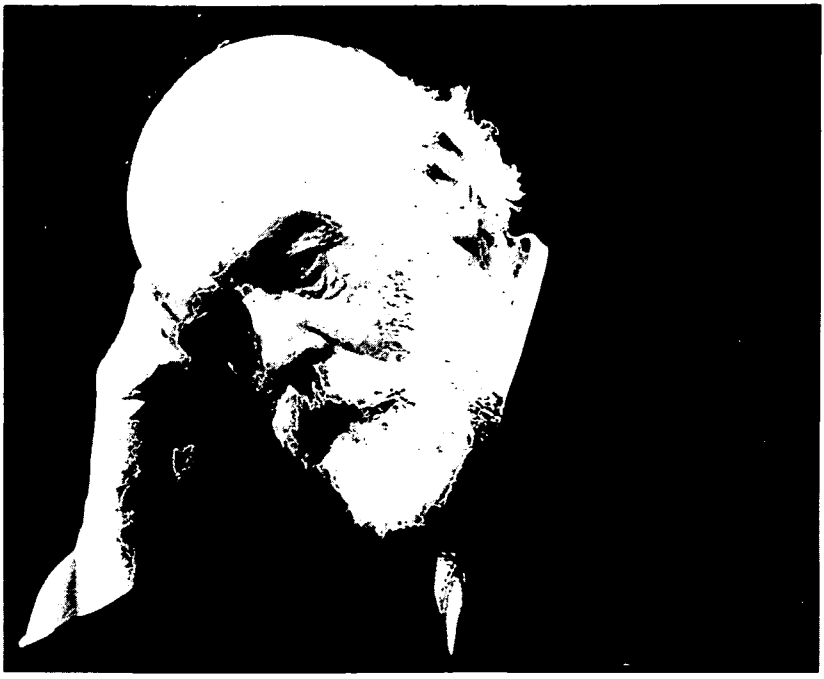

Wide World Photos, Inc.

Sir Oliver Lodge

by many neighbors. A code was worked out and many felt that, through its use, communication with the dead was possible. The rappings centered around two daughters of John Fox, Margaret and Kate, although it was only with the arrival of a stepsister, Leah Fox Underhill, that the girls began to turn their "talent" toward a more profitable end. Public demonstrations were given throughout the United States and England.[1] In the 1860s, spiritualism had begun to spread more quickly in England than in the United States; and as the demand for more unusual manifestations of spirit contact increased, they were certain to be met. The initial forms included rappings and table tiltings.

> I then asked, "Where are Satan's headquarters? Are they in England?" There was a slight movement [*of the table*].
>
> "Are they in France?" A violent movement.
>
> "Are they in Spain?" Similar agitation.
>
> "Are they at Rome?" The table seemed literally frantic.[2]

They then progressed to spirit contact through séances and actual spirit manifestations. Most authors agree that the most convincing medium (a person who can contact the spirit world) was D. D. Home, although there

were many others who were successful.[3]

The spiritualist movement was surprisingly popular around the turn of the century. There have been many speculations why. Certainly a major reason was the doubt being cast on fundamental Christian teachings as a result of archaeological and biblical studies. Those affected were primarily from the educated middle and upper class. For many, spiritualism offered a form of compromise, a way of keeping the spirit of Christianity and at the same time accepting the facts inconsistent with their former beliefs.[4]

Whenever an important belief-system is challenged, there will be strong feelings on both sides of the issue. The scientific community was very much a part of the debate about the validity of spiritualism. Men like Michael Faraday, Lord Rayleigh, and Sir William Crookes empirically investigated some of the phenomena. Others, such as Alfred Russel Wallace and Sir Oliver Lodge, were actively involved in séances and wrote and spoke extensively on behalf of spiritualism. Wallace, Crookes, and Lodge were believers in spiritualism (for at least part of their lives) and it is difficult to find a writer espousing the movement who does not mention one of these gentlemen in such a way as to at least imply the scientific consistency and feasibility of spiritualistic manifestations.

The scientific expertise and accomplishments of Wallace, Crookes, and Lodge are well documented. Wallace in the theory of evolution, Crookes in his work with thallium and X-rays, and Lodge with his studies on the ether and electromagnetism. In the remainder of this article I will concentrate on Sir Oliver Lodge and describe his interactions with the spiritualists and his attempts to reconcile his scientific and religious beliefs. In this way, I hope to show the dangers associated with assuming that expertise in one field can be carried over to another.

Oliver Joseph Lodge was born in 1851, the oldest of nine children, to middle-class parents. He obtained his doctorate in 1877 from the Royal College of Science. From 1881 to 1900 he was the first professor of physics at University College in Liverpool. It was at this time that his major contributions to science were made. Specifically, the case can be argued that he seemed to anticipate Heinrich Hertz's discovery of electromagnetic waves, using Leyden jars and conducting wires to investigate the propagation and detection of electromagnetic waves. His major contribution concerned the interaction of light and ether moving relative to one another.[5] These and other new effects would be explained in 1905, when Einstein published his first paper on what has become known as the special theory of relativity. With his assumption of more administrative duties and philosophical objections to the changes in physical theory, by 1900 Lodge's contributions to physics were in essence ended.[6]

Lodge's interest in psychical research began in 1883 and by the turn of the century he had twice served as the president of the Society for Psychical Research (SPR), the most prestigious of such organizations in

England at the time.[7] Perhaps as his ability to contribute to physics decreased his enhanced interest in the paranormal helped to fill a void created by a changing interpretation of the natural world, an interpretation that upset many far greater physicists than Lodge.[8] In any event this interest in spirit phenomena continued until his death in 1940. Lodge's work in the paranormal can be divided into two parts: that occurring before September 14, 1915, and that occurring afterward. On that day his youngest son, Raymond, was killed in World War I, a tragedy that deeply affected both Lodge and his wife.

In his 1909 book, *The Survival of Man—A Study in Unrecognized Human Faculty,* Lodge stressed that a scientific and objective study of psychical phenomena was necessary and implied that contemporary physics might be totally inappropriate to study it. Not unexpectedly, he tried to explain telepathy by means of the ether and speculated that some sort of resonance was necessary to send and receive telepathic signals. The general impression one gets is that Lodge was groping for an explanation of something he believed existed. He was much more hesitant than later in his life to accept the existence of the occult, but it is clear that he would have liked it to be genuine. Also obvious is that Lodge was only nominally aware of the possibilities of fraud and subconscious cues and biases. He explicitly stated that telepathy seems to work best when the receiver and sender are touching. In other instances he describes successful experiments in which the conditions for success had been set after the experiment was performed and the data analyzed.

What objectivity Lodge did possess regarding the paranormal all but disappeared after his son's death. In *Raymond, or Life After Death* (1916) and *Raymond Revised* (1922) Lodge used the first third of each book to reproduce the letters written by his son to the family. Lodge often spoke of his grief at Raymond's death. There are indications that Raymond was his favorite son. Certainly he was most like his father when young. Further, there are fairly strong implications of guilt feelings aroused by their son's death on the part of both Lodges. Mrs. Lodge is quoted as explicitly stating that she had not seen enough of Raymond while he was alive. At the time of his enlistment the Lodges were touring America, and one gets the impression that they felt they should have tried to discourage him from joining the British Army. One final note: In his letters home, Raymond, an officer of course, continually portrays the war as a glamorous adventure, something it was not for most. In my opinion, the circumstances of Raymond's death set the stage for Lodge's wholehearted acceptance of the validity of the spirit world and his contact with it. For his own peace of mind and that of his wife, he had to speak with Raymond and seek his forgiveness—something that he was quick to obtain. Having thus been positively reinforced, his entry into the world of séances and mediums was a natural step.

Soon after the death of Raymond, Sir Oliver was contacted by a medium, a Mrs. Kennedy, who arranged for a number of séances (at least the first six after Raymond's death). She professed ignorance of the Lodges' personal life and said only that Raymond had contacted a control (a spirit intermediary), who in turn had relayed Raymond's interest in communicating with his parents.[9] It should be noted that the Lodges were reasonably well known and much information about them was public knowledge. Further, the mediums operating in England at the time had an informal network that shared information. This, coupled with the possibility of some relatively easy research on the Lodges, makes Mrs. Kennedy's claim of ignorance of the family somewhat hard to accept.[10]

When reading Lodge's accounts of the séances, his metaphysics, and his description of the afterlife, it becomes quite apparent that he believed wholeheartedly in its validity and existence. His naiveté and his trusting nature were his undoing. A few examples will show this.

First, Lodge felt that the existence of spirits and their interaction with our world was demonstrated conclusively by William Crookes. Lodge stated several times that his major purpose was to build on Crookes's experimental foundation. His building was to be largely anecdotal. Crookes's experiments with the mediums Florence Cook and D. D. Home were at best questionable due to his lack of understanding of hydrostatics, magic, and human nature.[11]

Second, Lodge, like Crookes, was not at all aware of the methods involved in giving a cold reading.[12] This is a technique that has worked for hundreds of years and today is used successfully by astrologers and many others in the more interactive fields of the paranormal. In essence, it involves pumping the interested party for information without letting him/her know it and then feeding this information back in a slightly disguised form. As an example consider the following segment of a séance involving Lodge.[13] Feda is the medium's "control."

Extract from the Record of O.J.L.'s [Oliver J. Lodge's] Sitting
With Mrs. Leonard, 3, December 1915

FEDA—Now ask him some more.

OJL —Well, he said something about having a photograph taken with some other men. We haven't seen that photograph yet. Does he want to say anything more about it? He spoke about a photograph.

FEDA—Yes, but he thinks it wasn't here. He looks at Feda, and he says, it wasn't to you Feda.

OJL —No, he's quite right. It wasn't. Can he say where he spoke of it?

FEDA—He says it wasn't through the table.

OJL —No, it wasn't.

FEDA—It wasn't here at all. He didn't know the person that he said it through. The

conditions were strange there—a strange house. [Quite true, it was through Peters in Mrs. Kennedy's house during an anonymous sitting on 27 September.]

OJL —Do you recollect the photograph at all?
FEDA—He thinks there were several others taken with him, not one or two, but several.

OJL —Were they friends of yours?
FEDA—Some of them, he says. He didn't know them all, not very well. But he knew some; they were not all friends.

OLJ —Does he remember how he looked in the photograph?
FEDA—No, he doesn't seem to think so. Some were raised up round; he was sitting down, and some were raised up at the back of him. Some were standing, and some were sitting, he thinks.

OJL —Were they soldiers?
FEDA—He says yes—a mixed lot. Somebody called C was on it with him; and somebody called R—not his own name, but another R. K, K, K—he says something about K. He also mentions a man beginning with B—(indistinct muttering something like Berry, Burney—then clearly) but put down B.

A few items in this short segment should be of interest. The photograph mentioned was a pretty safe bet since it was typical of soldiers to have a company picture. Also note the vague answers given by Feda. Feda herself is an intriguing entity. Feda was claimed to be an Indian child. And only through Feda could contacts be made back and forth with Raymond. Raymond never talked directly with his father but always through a control, often Feda. Because Feda was a child, her manner of conveying knowledge would be that of a child and thus subject to misinterpretation. Add to that the language problems of a child speaking at best a second language, and the stage is set for a series of cryptic revelations. A few notable examples in this short passage (given by Lodge himself as proof of contact with Raymond) will demonstrate. In the picture, was Raymond standing up? No, he doesn't seem to think so. That's a pretty definitive answer. Who was standing or sitting? A mixed lot. Who was in this mixed lot? An R and a C. First name, last name, first letter, occupation? Why talk in riddles? At this point I am always reminded of T. H. Huxley's response to an invitation to join the Dialectical Society, the precursor to the Society for Psychical Research:[14]

> Sir,—I regret that I am unable to accept the invitation of the Council of the Dialectical Society to cooperate with a Committee for the investigation of "Spiritualism," and for two reasons. In the first place, I have no time for such an inquiry, which would involve much trouble and (unless it were unlike all inquiries of that kind I have known) much annoyance. In the second place, I take no interest in the subject. The only case of "Spiritualism" I have had the opportunity of examining into for myself was as

gross an imposture as ever came under my notice. But supposing the phenomena to be genuine—they do not interest me. If anybody would endow me with the faculty of listening to the chatter of old women and curates in the nearest cathedral town, I would decline the privilege, having better things to do.

And if the folk in the Spiritual world do not talk more wisely and sensibly than their friends report them to do, I put them in the same category.

The only good that I can see in a demonstration of the truth of "Spiritualism" is to furnish an additional argument against suicide. Better live a crossing-sweeper than die and be made to talk twaddle by a "medium" hired at a guinea a *seance.*

I am, Sir, &c.,
T. H. Huxley.

29th January, 1869.

There are other examples to be found in *Raymond,* but the major points are made with the one above. Walter Cook, in *Reflections on Raymond,* analyzed the inconsistencies and inaccuracies in much more detail.

As time goes on the questions asked by Lodge become more metaphysical. Eventually the next world is described to him in some detail, which he then relates to us in numerous books. Needless to say, it is much harder to verify information of such a world than it is to test descriptions of Raymond and his activities. No doubt the mediums were much relieved to be asked such questions. This is a segment of Lodge's *Phantom Walls,* published in 1929:[15]

The testimony so far obtained, or purporting to be obtained, from departed human beings is to the effect that memory continues after bodily death; for reminiscences are employed as one means of proving identity.

This, if accepted, shows that memory does not effectively reside in the brain, although habitual usage of certain nerve tracts no doubt makes recovery of memory more easy than when the material instrument has been lost.

Habits may be weakened by that loss, but memory need not be impaired. We find that incidents that have made an impression on the mind of the deceased personalities are remembered, and can be recalled under proper stimulus.

Intellect continues also. Literary quotations are often ingeniously applied, so as to convey information in a curious characteristic and evidential manner.

Aptitudes for learning and for artistic production seem also to continue. Innate, and probably also acquired, faculties and tastes belong to the

individual, and are retained.

Indeed, the evidence is that the whole personality survives, with a character and powers similar to those displayed by the old bodily organism.

Above all, family affection continues strong; the desire to help friends and relatives is perhaps the most prominent feature, and indeed often constitutes the motive power that stimulated the effort to communicate.

Next, from his *Beyond Physics,* 1920.[16]

> I postulate, then, as the one all-embracing reality on the physical side, the Ether of Space. And I conceive that in terms of that fundamental physical entity everything else in the material universe will have to be explained. To me the ether is a continuous substance, far more substantial than any matter. It fills all space; though we have no real knowledge of its constitution, for it is too fundamental to have its constitution expressible in terms of anything else. It seems to be analogous to a perfect incompressible fluid in a violent state of minute circulatory motion, imperfectly conceivable as ultramicroscopic vortices circulating or spinning with the velocity of light.

Unfortunately what these two quotations portray is a well-meaning but confused man. Scientifically he is trying to cling to a past that has been rejected by most physicists. Metaphysically he is creating an afterlife that for understandable personal reasons he hopes exists. This is a modified form of Christian belief, more worldly and less fundamentalist than previously held Victorian beliefs. The objectivity he had shown in his science, at least prior to 1900, is totally lacking in his spiritualistic endeavors. His need to believe is too strong.

There were a few other major developments that Lodge somehow had to discount in order to continue his belief in spirit communication. Periodically, the best known mediums would be shown to be using deceitful and fraudulent methods in spirit manifestations. Many were self-confessed. Of those the most significant were the Fox sisters, Margaret and Kate, who in 1888 publicly admitted that they had been cheating. They then proceeded to give a demonstration of their "rappings" at a public hall in New York. Incidentally, the rappings were the cracking of toe joints amplified by resonance with the legs and surfaces of tables. Their renunciation was widely circulated in the United States and Europe, with many spiritualists simply refusing to believe it. The spiritualists countered that the confession was a publicity stunt by the sisters and that they had done it to generate some income.[17] Many similar arguments are still presented when fraud is shown in a paranormal claimant.[18]

More convincing to a scientist should have been the work of Harry Houdini, who in addition to duplicating most of the "tricks" of the mediums was able to document the fraudulent nature of many others in the movement. He was able to do slate writing, table tilting and spirit

photography, to mention a few. In his 1924 book, *A Magician Among the Spirits,* Houdini clearly presents quite normal means to produce these phenomena. He also makes a still valid observation that as the controls on an individual increase the paranormal incidents decrease. To me the most surprising and most distressing part of the book is a listing of murders of children and spouses, suicides, and insanity allegedly caused by belief in the information obtained in séances.[19]

A more detailed description of Lodge and the spiritualist movement I feel would provide examples similar to those already cited. I hope two points have been demonstrated. First, that the use of Sir Oliver Lodge (the same can be shown for William Crookes) as a reference to an early scientist involved in the spiritualist movement is valid. One cannot deny that. One should note, however, that the methods used and the conclusions reached by Lodge were questionable at best. His personal interest in the phenomena usually clouded his judgment and clearly forces one to reject him as an objective observer.

Second, because of his strong emotional involvement in the movement his scientific expertise was of little use to him. In fact, a scientist will generally assume the honesty of a colleague. This is a trait that simply is counterproductive in paranormal fields where frauds abound. As was pointed out by Houdini in the past, and by James Randi and Martin Gardner, among others, today, a group of individuals made up in part by scientists and magicians is best qualified to investigate occult claims.

Finally, in reading of the attempted scientific investigations of spirit phenomena, much of the general terminology and many of the techniques are still used today. Crookes felt that there was a psychic force. Lodge felt that telepathy would be easiest to show. People are still trying to prove the existence of such phenomena. Science progresses. Today most sciences are advancing at incredible rates, yet in many ways paranormal research is still where it was one hundred years ago. A cliché comes to mind concerning those who are unaware of the past being doomed to repeat it.

Notes

1. Harry Houdini, *A Magician Among the Spirits* (New York: Harper Bros., 1924), pp. 1-9.

2. Alan Gauld, *The Founders of Psychical Research* (New York: Schocken, 1968), p. 68.

3. Houdini, op. cit., Chap. 3.

4. Gauld, op. cit., pp. 75-76.

5. Charles Susskind, "Oliver Joseph Lodge," *Dictionary of Scientific Biography* (New York: Charles Scribner's Sons, 1973), pp. 443-444.

6. Oliver Lodge, *The Ether of Space* (London: Harper Bros., 1909).

7. Susskind, op. cit., p. 444.

8. Neither Planck nor Einstein were particularly pleased with the statistical

nature of the new quantum theory.

9. Oliver Lodge, *Raymond, or Life After Death* (London: Methuen, 1916), p. 98.

10. Walter Cook, *Reflections on Raymond* (London: Grant Richards, 1917), pp. 25-31.

11. Houdini, pp. 200-205; E. E. Fournier d'Albe, *The Life of Sir William Crookes* (London: T. Fisher Unwin, 1923), Chap. 12.

12. Ray Hyman, "Cold Reading: How to Convince Strangers That You Know All About Them," *Zetetic* (now the SKEPTICAL INQUIRER), vol. 1, no. 2 (1977):18-37.

13. Lodge, *Raymond,* op. cit., pp. 106-107.

14. Houdini, op. cit., pp. 198-199.

15. Oliver Lodge, *Phantom Walls* (London: Hodder and Stoughton Ltd., 1929), pp. 232-233.

16. Oliver Lodge, *Beyond Physics* (London: Allen and Unwin, 1920), pp. 45-46.

17. Reuben Briggs Davenport, *The Death Blow of Spiritualism* (New York: G. W. Dillingham, 1888).

18. Martin Gardner, *Science: Good, Bad and Bogus* (Buffalo: Prometheus, 1981). See particularly his discussions of Uri Geller.

19. Houdini, op. cit., pp. 180-190. •

Misperception, Folk Belief, and the Occult: A Cognitive Guide to Understanding

Folk beliefs arise and are continually changing as people reinterpret information to make it fit their culturally shaped preconceptions about the world.

John W. Connor

OF THE MANY THEORIES advanced for the study of folk belief and the occult, none I am aware of attempts to apply the findings of modern cognitive theory and research. I believe an understanding of cognitive theory will help to explain how the elements of folk belief and the occult are formed and transformed.

Research in cognition by Berlyne (1965) and Neisser (1967) discloses that cognition is itself an act of construction:

> The world of experience is produced by the man who experiences it . . . There certainly is a real world of trees and people and cars . . . however, we have no direct, immediate access to the world nor to its properties. Whatever we know of reality has been mediated not only by the organs of sense, but by complex systems which interpret and reinterpret information. [Neisser 1967:145]

Neisser also states that our experiencing of reality can never be entirely attributed to the stimulus alone. It is always a construction based only in part on currently arriving information. Our knowledge of things is not determined by the things themselves but by our perception of them. Reality testing does not depend on clarity. We do not doubt the existence of a

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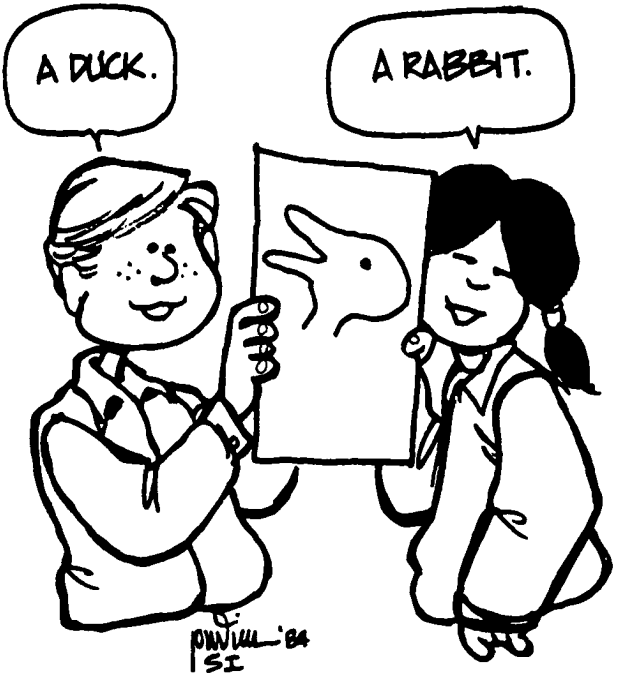


distant mountain on a hazy day. Reality testing involves questions of coherence, predictability, and sensibleness (1967:150).

Since humans do not come preprogrammed to live in an already prestructured world, they must create their own world of meaning and impose an arbitrary order on the complexity of eternal reality. This is the sociocultural reality established initially in childhood and maintained in continual interaction with others. This ordering of reality is an act of construction based upon perceptual sets. Perceptual sets are means by which we order, perceive, and interpret reality. The complex reality of a forest will be perceived quite differently by a botanist, an entomologist, a logger, a poet, and a little boy who is lost. A college campus will be perceived much differently by students majoring in architecture and those in police science, to say nothing of the different perceptions held by the administration, the professors, the custodial staff, and the newly arrived freshmen.

Since perceptual sets are the means by which we order reality, it also follows that visual and auditory hallucinations (or misperceptions) are endemic in any normal human population. Almost everyone has experienced the rather common auditory hallucination of hearing a telephone ring while running water in a bathtub. Here our folk belief that the

telephone always rings while one is in the bathtub is a major contributing factor; it creates in us a perceptual set. The running water creates a masking noise into which we read or hear the sound of a telephone ringing. Similarly, a few years ago, clerks in a California state office building began complaining of a phantom caller who would always hang up before the call could be answered. A little research soon disclosed that it was an auditory hallucination. During the lunch hour a clerk would be left alone in the office with strict instructions that any telephone call was to be answered at once. At the same time the clerk was also instructed to receive all incoming messages on the teletype machines located in a far corner of the office. As soon as the teletype would begin to chatter, the clerk would rush over to interpret it only to be interrupted by the telephone ringing. The teletypes created a masking sound into which the conscientious clerk misperceived a telephone ringing.

An even more dramatic illustration was a bill introduced into the California Legislature in April 1982 on behalf of Christian fundamentalists to place warning labels on certain rock songs that when played backwards allegedly contained satanic messages. A few words from the scientific community were enough to convince the legislators that when confronted with an ambiguous auditory background—as that of a record played backwards—a concerned listener would very likely hear anything that he or she was predisposed to hear. In this regard, it is essential to understand that most often such individuals are not intent on deception—they genuinely believe that what they have perceived has indeed taken place. Thus it would do no good to subject them to lie-detector tests or other means to establish their veracity.

Misperceptions sometimes occur among the ethnic groups in our society because of their perceived lower social status. A few years ago a young colleague boarded a crowded city bus on a hot summer day. In a few moments he was bathed in sweat and had to use his index finger to keep his heavy glasses from sliding off his nose. When he got off the bus, he was followed by three burly Mexican-Americans who wanted to know why he had been "giving them the finger." Only his obvious surprise and quick wit kept him from being roughed up.

Perhaps one of the best examples of the influence of one's perceptual set comes from experimental studies. In 1962 Schacter and Singer administered epinepherine (an adrenaline extract) to groups of students who were then asked by the experimenter's "stooges" to fill out forms describing the effects of the drug. Although the physiological reaction to the drug—a heightened state of arousal—is the same for all groups, the group whose stooge pretended to be happy reported that the drug made them happy, while those influenced by an "angry" stooge reported that it made them angry (Schacter and Singer 1962).

An even more dramatic experiment was reported by C. R. B. Joyce

(1976), who tells of two rooms in which there were ten people. In one, nine were given an amphetamine and the tenth, a barbiturate. In the other room the experiment was reversed. In both cases the "odd man out" behaved as did his companions. In one room the lone barbiturate taker behaved as though fatigue had been banished, while in the other room the lone amphetamine taker fell asleep (Rose 1976:322).

The influence of a collective perceptual set is such that natural phenomena may be quite easily interpreted as being *ipso facto* evidence of the occult. Thus, with a collective perceptual set of the world being a vast battleground between the forces of Good and the forces of Evil, it is easily understandable that a fifteenth-century European peasant would interpret the sounds of nocturnal animals as being the movement of demons. Dimly seen in the evening twilight, a flight of birds could quite honestly be perceived as a coven of witches on their way to Sabbath (Connor 1975:372). From my own experience I recall a Japanese peasant who stoutly maintained that the luminous will-o'-the-wisp sometimes seen on summer nights near Japanese villages was tangible evidence for lantern-carrying badgers who figured largely in Japanese folklore. In the same fashion, Solon Kimball once reported his conversations with an Irish peasant who was convinced that a geological formation was the work of the "little people," and nothing could be done to convince him to the contrary (personal communication).

There also exists in humans a drive to reduce conceptual conflict.

Berlyne (1965:255) defines conceptual conflict as a "conflict between incompatible symbolic patterns, that is, beliefs, attitudes, thoughts, ideas." Berlyne further states that the major types of conceptual conflicts, such as incongruity, contradiction, confusion, and irrelevance, can be reduced by suppression and conciliation. Suppression is simply the reduction of conflict by suppressing thoughts about the subject matter or by avoiding stimuli that tend to evoke such thoughts. Conciliation, on the other hand, is a way of reducing incompatibility by the use of new information that reveals that the beliefs are not incompatible (Berlyne 1965:256-60).

Perhaps one of the most influential and productive figures in the field of conceptual conflict, or cognitive dissonance, as he prefers to call it, is Leon Festinger. Along with two collaborators he did a study of a group who predicted the end of the world by forces from outer space. Those who were the true believers would be saved by a flying saucer. When the appointed time came and went, there was indeed a considerable amount of conceptual conflict or cognitive dissonance. The problem was solved in part by "discovering" that the world had been saved because of the faith of the flying-saucer cult and that the earth was to be given a second chance (Festinger, et. al. 1956).

Discussion

In their attempt to order and make sense of the world, humans will interpret and reinterpret information to make it compatible with what is already known. In a classic experiment conducted over half a century ago, Bartlett (1932) had experimental subjects at Cambridge University read a translation of an American Indian folktale. Reproductions of the tale were made at various intervals ranging from 15 minutes after the event to several weeks, months, or even years later. In each subject there was a gradual transformation of the tale so that those elements alien to English culture were dropped while others more compatible were added.

An inadvertent experiment similar to Bartlett's is reported by Dundes (1965:269-276) in which Frank Cushing told the Italian tale of "The Cock and the Mouse" to his Zuni informants. About a year later he heard the same story in a Zuni version; as in Bartlett's experiment, the Italian elements had been dropped and were replaced by those more meaningful to the Zuni.

In another inadvertent experiment, near the end of the past century, Cushing told the story of Cinderella to his Zuni informants and later found that it had been thoroughly transformed into "The Poor Turkey Girl," with settings and incidents that were typically Zuni (Greenway 1964:227-234).

Similarly, when European folk tales like "Goldilocks and the Three Bears" have been added to Japanese children's readers, they have been

changed to fit Japanese culture. In the traditional version of the tale, Goldilocks eats the porridge, sleeps in the bed, and then leaves suddenly when the bears appear. To the Japanese, such rude behavior is unthinkable. The Japanese version therefore has Goldilocks apologize profusely for her rude behavior (George DeVos, personal communication).

Another illustration of the importance of one's perceptual set may be found in the saying "A rolling stone gathers no moss." Most Americans would interpret this to mean that one must keep moving both socially and geographically; in the American mind a moss-covered stone is one that has stagnated. The Japanese, on the other hand, interpret the saying to mean that, in order to acquire experience, expertise, patience, and the patina (*Sabi*) that comes with age and experience, one must stay put.

The importance of one's perceptual set has long been known to influence the memory of an event. In another classic experiment, Allport had subjects memorize a picture of a subway scene in which several seated figures are depicted. Standing in the foreground are a black man in a business suit having an argument with a Caucasian male dressed in work clothes and holding a straight razor in his hand. In subsequent retelling of the story, there was a gradual shift in the razor from the hand of the Caucasian to that of the black (Buckhout 1974).

From my own experience, I recall the home of a black family that caught on fire in the summer of 1941. Because we often played in the burned-out shell, I can clearly recall that it was quite obvious that the fire began on a kitchen stove in the basement and roared up a stairwell. Yet, when I returned to the area in 1968, during the height of the civil rights movement, a story was widely circulated that the black family had been deliberately "burned out" by angry whites. Even though I pointed out the real cause of the fire and that sympathetic whites had helped with food and clothing, there was nothing I could do to scotch the story. Here was yet another sad example of the manner in which local history is rewritten.

Similar retelling of events often strips away the less dramatic elements of a story and substitutes those that are felt to be more suitable. Thus most of the tales told of the sinking of the *Titanic* include the story of the noble band playing "Nearer My God to Thee" as the ship went down. This story apparently originated a few days after the disaster. According to Tom Burnam (1980:216), the band played ragtime until the bridge went under, at which time the band master led the musicians in the Episcopal hymn "Autumn."

A less dramatic example, but still germane, was the recent Australian film *The Man from Snowy River* (1982). From my own experience, more than half of those who had heard of this film reported it to be "The Man from Snowy Mountain," because they associated snow with mountains and not with rivers.

An additional example can be seen in the corruption of the German

word "Deutsch" (German) to "Dutch" in the "Pennsylvania Dutch," which has become so embedded in the language that many items sold in eastern Pennsylvania are stamped with tiny windmills to certify that they do indeed come from the Pennsylvania "Dutch" country and are therefore authentic.

The belief that St. Bernard dogs search for snowbound victims with little casks of brandy around their necks is so firmly embedded in the popular mind that it has been the subject of countless cartoons and even a Swiss chocolate candy-bar wrapper. Unfortunately, there is no record of a St. Bernard dog ever carrying a brandy cask (Burnam 1980:192).

Exceptionally dramatic events, especially those containing an element of the unknown or danger, are extremely conducive to the rapid spread of those urban legends that border on mass hysteria—or "collective behavior," as it is called by sociologists. In terms of the previously discussed experiment by Schacter and Singer (1962) in which subjects were administered epinepherine and then experienced a "heightened state of arousal" that was then interpreted for them by an experimenter's stooge, any dramatic, unknown event that is potentially dangerous will evoke in a large segment of the population a "heightened state of arousal." In turn, this "heightened state of arousal" can be quickly defined or exploited by almost any dramatic event that symbolically contains an element of the unknown dangers.

Thus, in October 1938, the famous Orson Welles "War of the Worlds" broadcast, which caused considerable panic, came after the Munich crisis of the previous month and a growing fear of war. The initially unknown cause of Legionnaires' Disease in the summer of 1976 created an epidemic of plant shutdowns in various sections of the country as people reacted to what many thought was a communist plot to spread germ warfare in the United States. The Tylenol scare in the fall of 1982 created several incidents in which students at football games—already in a heightened state of arousal—rapidly became ill when a rumor spread that a "Coke" machine had been laced with arsenic-laden Tylenol. (*Sacramento Bee*, October 24, 1982). In like manner the "heightened state of arousal" that accompanies international crises also creates perceptual sets for interplanetary intervention to save the earth, and the number of reported UFO sightings begins to increase. One is also tempted to speculate that the enormous success of Stanley Kubrick's film *2001* (1968) was a catalyst that created in the popular mind a perceptual set that permitted the widespread acceptance of the von Däniken books in the late 1960s and early 1970s.

The drama, excitement, and heightened state of arousal accompanying the stock-market crash of 1929 created in the popular mind a belief that Wall Street was littered with bodies because of the suicides of brokers and businessmen whose fortunes had been wiped out in the crash. Yet, if one remembers that the generation of the 1930s was in the midst of making a psychological transition from the values associated with rural America to

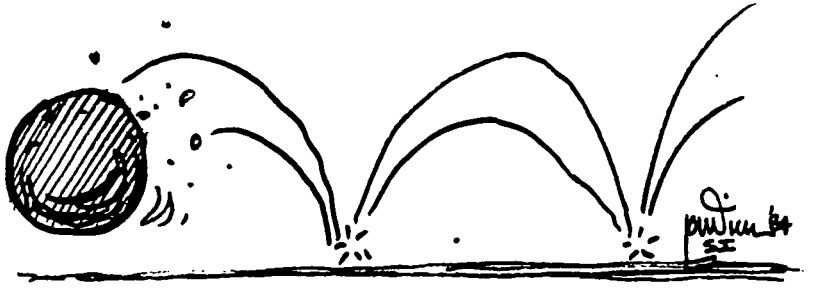
those of the modern industrial, technological society, the story has all the earmarks of a comeuppance tale; indeed, according to Burnam (1925:249), there was no increase at all in the suicide rate.

In many ways we are still making the psychological transition to an urban, industrial society. In the folk mind there still exists more than a lingering mistrust of mass marketing and big business. There are many cautionary tales that harken back to the pre-Food and Drug laws and the dread suspicion that one really doesn't know what goes into one's food. Despite the reassurance offered by such fast-food chains as McDonald's, where the gleam of sterile stainless-steel kitchens and neatly groomed attendants are deliberately designed to relieve anxiety, such persistent tales as doctored hamburgers and Kentucky-fried rats recall an earlier generation's attitude toward the food industry that was expressed in the delightful doggerel: Mary had a little lamb/ And when it began to sicken/ She sent it off to the Packing Town/ And now it's labeled "chicken" (Bailey 1966:662).

The shock of the Arab oil embargo of 1973 and rising gasoline prices reawakened the old mistrust of big business, especially of the oil industry. As gasoline prices soared, so did the many versions of the tale of the "miracle carburetor," which promised unbelievable mileage. The product of some backyard genius, the carburetor was allegedly purchased by the oil companies to keep it off the market. Actually, the tale had been around since the 1930s.

In a similar manner, the widespread shock and dismay that followed the assassination of President Kennedy was marked by many attempts to find some sort of mystical connection between the martyred president and Abraham Lincoln. Thus it was shown that the names of both Kennedy and Lincoln have seven letters, while those of their assassins, Lee Harvey Oswald and John Wilkes Booth, have fifteen. Lincoln was shot in a theater and the assassin ran to a warehouse. Kennedy was shot from a warehouse and the assassin ran to a theater. Both Lincoln and Kennedy were succeeded by men named Johnson, and so on.

A more recent example of the influence of one's perceptual set during



a heightened state of arousal is to be found in the story of a man who, while praying for his critically ill son, looked up and saw a likeness of Christ's face in the grain on the wooden door to the recovery room. Since then, hundreds of people have been jamming the third floor of the hospital to see the door (*Sacramento Union,* April 17, 1983).

On a less dramatic note, the great New York blackout of 1964 reawakened in the popular mind an adolescent perception of what one does when the lights are out. Thus, with smiles and naughty nods of insight, it was widely held that there was a significant increase in the birthrate some nine months later. Actually, the birthrate went down slightly (Burnam 1980:20).

A more recent transformation of an urban legend to fit a popular perceptual set is that of the young girl kidnapped at a shopping center by a man who had sedated her with either an injection or a cloth soaked in an anesthetic. First reported by Brunvand (1981:183-84), the story has appeared in many parts of the country. The most recent version reported by my students as having occurred in a nearby shopping center describes the kidnapper as a black man.

Another area in which existing folk taxonomies are reflected in one's perceptual set is in our use of the number three, as in three strikes in baseball, the number of the trinity, the branches of government, and so on. This usage is so widespread in our culture that professors automatically give three examples to support or illustrate their points. It is also seen in the folk beliefs that disasters or deaths occur in threes and that it is unlucky to light three cigarettes from the same match. There is also a carryover in such fairy tales as "Goldilocks and the Three Bears," "The Three Blind Mice," to say nothing of the propensity of many writers to produce trilogies (Dundes 1968:401-424).

Similarly, in the Near East the number forty is considered auspicious or magical. In the flood of Noah it rained for forty days and forty nights; Christ went into the wilderness for forty days; and in the realm of legend we have "Ali Baba and the Forty Thieves." In Japanese society, on the other hand, the number five is considered auspicious. Japanese work and the neighborhood groups were organized on the principle of *goningumi,* or a five-person group. Japanese doctors give prescriptions that will last for five days. In indigenous psychotherapies a "breakthrough" is supposed to take place on the fifth day, and tableware for domestic use comes in sets of five.

Summary and Conclusion

In this paper we have attempted to apply the findings of cognitive psychology as an aid in understanding the manner in which folk beliefs are begun, changed, and reinterpreted over time. Cognitive psychology shows

that the ordering of reality is an act of construction based upon perceptual sets. Perceptual sets may be classified into those that are perhaps innate—as, for example, our response to a smile, scowl, or tears (Eibl-Eibesfeldt 1975:442-443); those that are cultural, as in the American propensity to think of three as a lucky number, while five is considered normal or auspicious in parts of Asia, and forty in the Near East; and, finally, those that are idiosyncratic, such as an artist's perception of color and form.

In every society, there exist "ideal" models of heroes, behavior, dress, and so on. These fluctuate through time and from event to event. All have in common elements that have been recognized from the time of Plato's cave to that of the six o'clock news. These elements could be called fitting or dramatic, or "neat." They sum up or encapsulate in dramatic, symbolic form the beliefs, values, ideals, fears, and prejudices of a group of people. It is for this reason that stories with dramatic potential are told and retold so that they "fit" the perceptual sets of a group.

Thus, as Dundes points out in his analysis of the life of Jesus, "I have tried to show that the life of Jesus must be understood as a version, a very special version, of the standard Indo-European hero pattern. . . . The life of Jesus cannot be understood in isolation from the cultural context . . . nor understood without reference to the social and psychological factors inherent in circum-Mediterranean and Near-Eastern form of the family" (1981:78-79).

For these reasons one cannot expect one's perception of reality to be the same as those of a different culture. Thus, during World War II, a U.S. Navy health officer attempted to explain to the natives of a Pacific island the health problems associated with the common houselfy. As a training aid he used a foot-long model of a fly. After seeing the rapt attention on his listener's faces, he thought he had made his point, until a chief stood up and said, "I can understand your preoccupation with flies in America. We have flies here, too, but fortunately they are just little fellows," and he held up his thumb and forefinger to show the size (Foster 1962:122).

In a campaign to encourage dental hygiene in Fiji, health officials reproduced a New Zealand poster depicting a whale jumping out of the water after a tube of toothpaste. The response was enthusiastic: Fiji fishermen sent in rush orders for the new fish bait (Foster 1962:138).

Cognitive theory cannot explain all the means by which misperceptions, folk belief, and the occult are created and transformed, but it can help us to better understand the process. By way of analogy, those rough fragments of dramatic experience that survive their initial immersion in the cultural stream are shaped by the various forces, eddies, and currents until the rough edges are removed and they are rounded and retained. On the other hand, it often happens that some loosely constructed tales simply break up and muddy the water.

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Psychology and UFOs

Psychological research on the topic of UFOs has been surprisingly scarce. The few studies appear to have been done in isolation from one another. Some questions have been answered, but more data are available and can be readily exploited.

Armando Simón

INVESTIGATIONS OF UFOs have for the most part been performed by either nontechnical personnel or by professionals whose realms of expertise extend only into the natural sciences, in particular, astrophysics. It is only logical that astronomers would be involved, since flying saucers from the very beginning were assumed to be extraterrestrial spacecraft (Menzel and Boyd 1963; Vallee 1965). However, mundane meteorological explanations for sensational cases of UFOs (translate: blobs of light) traveling at an apparent 200 mph and making 90° turns were emotionally unsatisfactory. Even when the investigator patiently explained that any living organism inside such a "craft" would have become grape jelly by a 90° turn, due to the force of inertia, such explanations were waved aside with the frustrating response that "the laws of science as we now know them may not apply to the craft" or that the assumed aliens were far advanced technologically and could have overcome such a petty obstacle.

Refusal to believe in "down to earth" solutions resided in several types of advocates (Jacobs 1975). One was the cynical type, who would financially milk the phenomena for all it was worth. Another was the "contactee" (a person who claimed to have been picked up by angelic-looking aliens who were Christians, given a ride to Mars or Venus, maybe even meeting Jesus, and given a mission to spread pacifism on Earth) and

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his or her followers (Menger 1959). A third type of advocate would adhere to any belief even remotely connected with the occult. Last, there were groups of people who sincerely believed that the UFOs they saw were extraterrestrial ships, such beliefs being reinforced by the sometimes spectacular effects present in the sightings. Yet none of the believers ever questioned their basic assumption: Why were the flying saucers automatically interpreted as being from outer space and piloted by aliens, in as much as they were a novel phenomenon with no previous clue as to their origin or occupants? To this day, this question has not been considered by either the UFO skeptics or the believers.

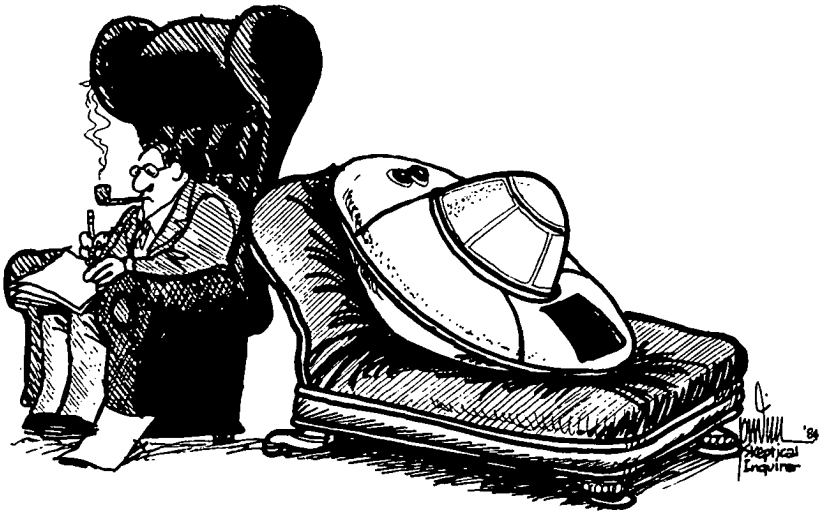
Psychologists studying the UFO phenomenon were scarce until after the conclusion of the University of Colorado Condon Report in 1968. The lateness of the involvement of psychologists is both surprising and unexplainable, since early on there was much speculation voiced about the psychological components in sightings of flying saucers. Most of the earlier questions and opinions alluding to psychological ramifications had been rather crude: "Are people who see flying saucers crazy?" "Flying saucers go away when the silly season ends." "One cannot doubt the reports made by reliable professionals like policemen, doctors, and pilots." "Did the people who saw the UFOs last night really imagine everything?" (Jacobs 1975; Hynek 1974).

Even so, the phenomenon strongly implied a role for psychologists. When a few did finally get involved, they faced the same problems natural scientists had faced, namely, that a UFO could not be seized for study, nor would it stay in one place long enough for instrument readings, much less a research design. Worse, they had to shake off the sensationalism promoted by the mass media.

The research presented here falls within various branches of psychology and is so grouped. No new specialty within psychology has emerged to investigate this phenomenon. The degree of interest within a particular specialty has been sporadic and subject to a lack of systematization. Personality researchers, for example, by all expectations should have taken the personality correlates of skeptics, contactees, hoaxers, and reporters and nonreporters of sightings in order to compare the profiles. Yet few, if any, psychologists have done so. In contrast, the field of attitude-formation has enjoyed comparatively heavy investigation vis-á-vis UFOs, as will be seen.

Psychoanalysis

In spite of their sexually suggestive elliptical and cigar-shaped descriptions, UFOs have drawn relatively little attention from the psychoanalytic field. Wilhelm Reich, toward the end of his turbulent career and before his research papers were burned by the Food and Drug Administration, saw



a UFO and was of the opinion that it was of extraterrestrial origin and warlike in its intentions (Boadella 1973). His interpretations were not psychological, nor was the research he engaged in during the latter part of his life—such as his work on "orgone energy," which he suggested could be put to good use against flying saucers in the forthcoming war of the worlds. Ironically, Reich, like another famous psychoanalyst, Sigmund Freud, became somewhat mentally unstable in his later years.

It should not be too surprising that a psychoanalyst as multifaceted in his interests as Carl Jung (1961) would turn his attention to flying saucers. He was one of the few to do so with more than a passing interest. Jung first gave his views on the subject in a 1954 Swiss weekly, and these views were subsequently distorted by the world press (Jung 1959). When he issued a statement correcting the sensationalist version, he was curiously ignored by the press, a phenomenon similarly noted by UFOlogists Philip Klass and J. Allen Hynek. "The moral of this story," Jung wrote in his book *Flying Saucers,* "is rather interesting. As the behavior of the press is a sort of Gallup test with reference to world opinion, one must draw the conclusion that news affirming the existence of UFOs is welcome, but that skepticism seems to be undesirable. To believe that UFOs are real suits the general opinion, whereas disbelief is discouraged. This creates the impression that there is a tendency all over the world to believe in saucers and to want them to be real." Reviewing the pertinent case histories, including his patients' art works, and extensively reading the UFO literature, he suggested a hypothesis. He started with the fact that the mandala has at all times, in all cultures, been the symbol of order, of wholesomeness, of a desire to bring sanity out of insanity. Further, he affirmed that UFOs were visionary rumors and that in order to have a visionary rumor

the following are prerequisites: (1) unusual emotion, (2) emotional tension, and (3) projection.

Essentially, Jung stated that, in the 1950s and 1960s, mankind was faced with the dilemma of nuclear annihilation, on the one hand, or totalitarian subjugation due to Soviet imperialism, on the other. (Needless to say, his works were banned in the USSR.) Therefore, flying saucers were projections from the unconscious that, because of their mandala shapes and their alleged heavenly origins and technological superiority, had an air of salvation about them. Because of our modern rationalism, we interpreted such visions of longing and deliverance not as heavenly, other-worldly angels, but as mechanical, other-worldly spaceships. *Such projections, incidentally, would come from quite normal persons.* It should be further noted that the peak years for flying saucer sightings in the United States (1952, 1957, 1966) were years when the world dilemma referred to above was most threatening to the American public (the Korean War and presidential elections, the highly traumatic Sputnik, and the Vietnam war).

One other psychoanalyst became interested in UFOs. Berthold Schwarz (1968, 1969), an American psychiatrist, began a decade later to inquire about a totally different aspect of the phenomenon, to wit, the frequency of UFO themes in the narratives of psychiatric patients as well as the question of sanity in relation to sightings of UFOs. In a local journal of medicine in New Jersey, Schwarz reported that, of the thousands of patients he had seen and of the thousands of patients in a nearby county mental hospital, not one had ever reported any UFO experiences. Conversely, all of the sighters that Schwarz interviewed seemed to be quite stable and without any symptomatology. The only case that I myself have run across in the literature has been of a case study in Arthur Janov's book on primal therapy, wherein flying saucers did play an important role in the patient's delusions.

Hypnosis

The use of hypnosis, more than any other aspect of psychology in UFO research, has gained much publicity. Not only have popular magazines like *Omni, Psychology Today,* and *Astronomy* treated the topic, but a TV dramatization of the well-known Betty and Barney Hill abduction—which some psychoanalysts have interpreted simply as a case of a *folie a deux*—was aired in 1975, nearly ten years after the original incident. There seems to be a set pattern in nearly all abduction cases. This pattern, and the fact that most of the "time loss" cases occurred after the 1966 publication of *The Interrupted Journey* (Fuller 1966), implies mass suggestion.

An abduction case usually goes this way: A person is in a deserted area of the country, possibly with some relatives or friends, sees a UFO,

and after some time is trapped by aliens who physically examine and then return the individual, sometimes with amnesia (Sprinkle 1979; Fuller 1966; Wells 1981).

Some doubts have begun to be cast upon the validity of narratives given under hypnosis. Alvin H. Lawson (1977) found 16 people who were not well acquainted with UFO lore. He had a clinical hypnotist hypnotize them into believing they were inside a flying saucer and then had them describe their "experience." Their accounts were quite similar in detail to the actual reports of abductions and included medical examinations. His conclusions were presented at the American Psychological Association in 1976.

An experimental objection to the Lawson study was carried out by Allen Hendry (1979), the chief investigator at the Center for UFO Studies. A woman had seen a UFO in 1978 and claimed to have been in telepathic communication with the aliens, who did not land; she also experienced nausea. Upon obtaining additional information, Hendry found a conventional explanation for the object seen but did not reveal the identity of the object to the sighter (the woman, incidentally, had claimed never to have believed that anything like the story above could be true). Hendry then hired a hypnotherapist. Under hypnosis, the woman did *not* invent any additional details, and her account was in the past tense, unlike that of true "abductees." In other words, under hypnosis, she stated she had seen a UFO and not that she had been abducted, nor that she had been medically examined by the aliens. One last point: Her Minnesota Multiphasic Personality Index profile was evaluated as not coming from a psychologically healthy person.

It is surprising, however, that to date few have looked at the abduction cases in light of the controversy enveloping hypnosis as a whole. The controversy revolves on the question, What exactly *is* hypnosis? There are two theories. One interprets hypnosis in its traditional sense, that of inducing a trance state as a gateway to the unconscious. The alternative interpretation is that the "hypnotizing" of a subject leads to a role-playing state, the role being that of a "trance state"; the degree of influence over a subject (even to the point of causing warts and ignoring pain) is directly related to how suggestible that person is (Spanos and Barber 1974). This second theory is somewhat related to the objection made over the abduction cases, that the hypnotherapist is subtly influencing the session. Thomas Szasz has given a relevant definition in *The Second Sin:* "Hypnosis: two people lying to each other, each pretending to believe both his own and his partner's lies."

Attitudes

Attitude formation is one of the most well-traveled research paths in both

psychology and sociology. Nearly every topic imaginable that one could have an opinion on has been investigated and its correlates explored. Most of the research on attitudes toward UFOs/flying saucers/extraterrestrial-life was done during and after publication of the Condon Report. Indeed, for many reasons the 1966 wave of sightings proved to be the watershed for the beginning of all reputable research on the phenomenon (Simón 1979a). The attitude studies fell in two general directions: one was to identify the various outlooks toward flying saucers, their interrelationships, and who held such beliefs; the second was to use the belief in such concepts to test a particular theory. An example of the former is the periodic Gallup Poll, which has consistently seen a rise in the percentage of the population admitting to having seen a UFO and to believing there is life in the universe beyond our planet. The Gallup data, incidentally, have been used for further secondary analysis by other researchers.

Aldora Lee (1969) emphasized the importance of studying attitudes toward flying saucers by pointing out that almost always there is no physical evidence, just verbal reports, and that the reports are colored by the beliefs held by the witnesses. Examining the Gallup data and conducting polls on her own for the much-maligned Condon project, Lee found that (*a*) age, education, and geographical region were related to whether respondents believed in extraterrestrial life, (*b*) sighters do not differ from nonsighters with respect to sex, age, education, or geographical region, (*c*) adults, compared with teen-agers, tend to be negatively inclined toward the possibility of UFOs' extraterrestrial origin.

In establishing the various attitudes toward UFOs independently, Simón (1979b) and Saunders (1968) have employed very complicated statistical techniques in order to ascertain the very obvious. For example, a 63-item questionnaire that Simón (1979b) administered to college students and members of the National Investigations Committee of Aerial Phenomena (NICAP), a UFO group, upon being factor-analyzed, brought out ten obvious attitude factors: belief in extraterrestrial visitation, skepticism of UFOs, belief in the occult, extrapolation of nature, psychological explanations, disbelief in contactees, witnessing, belief in extraterrestrial life, reluctance to report a sighting, belief in possibilities.

On a different plane altogether is Lawrence Littig's (1971) brief but important study. Littig was interested in matching the belief in life in other worlds with degree of *affiliation motivation* (the desire to be accepted and loved by others). Giving his subjects a test for affiliation motivation and separating the high and low scorers, he compared their responses to the statement, "Further research on UFOs (Unidentified Flying Objects, e.g., 'flying saucers') will reveal that they come from outer space." He found that subjects scoring strongly in affiliation motivation tended to significantly agree with the statement. Littig furthermore stated that a peopled universe is more reassuring than an empty one and that there are

psychological processes involved in the beliefs in extraterrestrial life, but that such processes tended to be normal ones rather than abnormal and irrational.

Littig's study was indirectly supported by P. Fox (1979). Asking her subjects what they thought UFOs were, she matched her answers with attitudinal and background data. She found that the best predictor of an extraterrestrial interpretation of UFOs was agreement with the statement that there are intelligent life forms on other planets.*

Littig's study was unfortunately overlooked within the field of UFOlogy during the controversy in *Science* sparked by Warren (1970), possibly because *Science,* unlike a specialized journal, is read by all disciplines. Warren examined the 1966 Gallup Poll data in view of the *status inconsistency theory.* Essentially, this theory states that individuals who do not have equivalent status in ethnicity, education, income, or intelligence are bound to feel that they are "outsiders" and hence are under tension. This tension will find expression in asocial actions. Warren came to the conclusion that sighters of flying saucers upheld the theory. He maintained that upon breakdown of the collected data, the Gallup Poll verified that status inconsistents were 16 times more likely to see UFOs. In a UFO newsletter rebuttal, R. Leo Sprinkle of the University of Wyoming countered that the real question was the difference between sighters who report the UFOs seen and sighters who do not report their sightings. Hynek (1974), in turn, dismissed the hypothesis in his book *The UFO Experience* because in one particular sighting the witnesses did not appear to be status inconsistent. The best critique of the Warren study, however, came from Saunders, who delivered a report at the American Institute of Aeronautics and Astronautics in 1975. Saunders simply pointed out that Warren's paper was devoid of any statistical analysis. His own analysis of other, independent data seemed to indicate that it was status *consistency* that was predictive of sightings, a finding supported by other studies (Westrum 1979; Fox 1979). In my view, this makes more sense, since UFOs are almost universally accepted in North America. To date, no more attempts at settling the controversy have surfaced anywhere.

Perception

Logically, perceptual psychologists should have been very productive on the subject of UFOs. Yet with one important exception (Haines 1980), the extent of research on UFOs' (mis)perception has been to cite case studies

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*Both of these studies at least explain why it is that nearly every time I reply in the negative when asked if I believe flying saucers are visits from space, I am immediately asked the irrelevant, non-sequitur question, "But don't you believe in life on other worlds?" The same thing, I am sure, happens to others.

and a few experiments, some of them involving the common *autokinesis* and *autostasis* effects (Wertheimer 1968). For example, Carl Sagan and Thornton Page (1972) in *UFOs—A Scientific Debate* cite a case study wherein several observers witnessed the reentry of Zond IV and interpreted it as a UFO. Reports came in of its having windows, starting grass fires, frightening a dog, and causing an observer to be unexplainably overcome with sleep. Even the Condon Report, which was specifically charged with the study of the psychological components of UFOs, limited its treatment of perception to a couple of general textbook chapters in its ballast section; there was only one true experimental study in the report, that of Aldora Lee cited above.

In a series of tests, Haines (1979, 1980) asked two groups of people to draw a UFO, comparing the drawings by the group that reported having previously seen a UFO with those of the one that had not seen a UFO. Both tended to give the basic dimensional characteristics, suggesting that there is an underlying consensus of what a UFO should look like. Nevertheless, the former group tended to draw fewer openings, apertures, insignia, domes, and landing gear than the latter group. Haines then investigated the reliability of potential drawings of UFOs by presenting a visual stimulus to a group of subjects and asking them to draw it, the stimulus being allowed to be viewed as long as desired. Errors were made. Even bigger errors were made during a UFO investigator workshop, where participants were asked to draw the UFO that was verbally described by a witness; the investigators' drawings compared poorly with the original witness's. A large amount of "investigative experience" in terms of years did not necessarily guarantee greater accuracy. Haines ended his series of experiments by suggesting that further research was indicated, a classic of understatement.

Addressing himself to this same problem, but more with the aim of aiding future investigators, Roger Shepard (1979) noted that test results based on recognition are more valid than tests using verbal recall. He compiled an exhaustive array of UFO drawings based on photographs, as well as computer-generated silhouettes of UFOs and a list of terms used in the past in order to describe observed phenomena in future sightings.

Paradoxically enough, despite the involvement of psychologists in investigating UFOs, it is a nonpsychologist who has come forth with the most testable hypotheses amenable to perceptual research. Philip J. Klass (1974), who incidentally has urged involvement by psychologists in the UFO arena, presented several propositions in his book *UFOs Explained.*

> 1. Basically honest and intelligent persons who are suddenly exposed to a brief, unexpected event, especially one that involves an unfamiliar object, may be grossly inaccurate in trying to describe precisely what they have seen.

2. Despite the intrinsic limitations of human perception when exposed to brief, unexpected and unusual events, some details recalled by the observer may be reasonably accurate. The problem facing the UFO investigator is to try to distinguish between those details that are accurate and those that are grossly inaccurate. This may be impossible until the true identity of the UFO can be determined, so that in some cases this poses an insoluble problem.

3. If a person observing an unusual or unfamiliar object concludes that it is probably a spaceship from another world, he can readily adduce that the object is reacting to his presence or actions when in reality there is absolutely no cause-effect relationship.

4. News media that give great prominence to a UFO report when it is first received, subsequently devote little if any space or time for reporting a prosaic explanation for the case when all the facts are uncovered.

5. No human observer, including experienced flight crews, can accurately estimate either the distance/altitude or the size of an unfamiliar object in the sky unless it is in very close proximity to a familiar object whose size or altitude is known.

6. Once news media coverage leads the public to believe that UFOs may be in the vicinity, there are numerous natural and man-made objects which, especially when seen at night, can take on unusual characteristics in the minds of hopeful viewers. Their UFO reports in turn add to the mass excitement which encourages still more observers to watch for UFOs. This situation feeds upon itself until such time as the news media lose interest in the subject, and then the "flap" quickly runs out of steam.

7. Whenever a light is sighted in the night sky that is believed to be a UFO and this is reported to a radar operator, who is asked to search his scope for an unknown target, almost invariably an "unknown" target will be found. Conversely, if an unusual target is spotted on the radarscope at night that is suspected of being a UFO, and an observer is dispatched or asked to search for a light in the night sky, almost invariably a visual sighting will be made.

Social Psychology

The studies that fall into the social psychology category are somewhat similar to those under the section on perception. There is a lack of reported investigation in proportion to the wealth of potential experiments that could be conceived and concluded.

By coincidence, however, a classic study in social psychology involved flying saucers (Festinger, Riecken, Schachter 1956). *When Prophecy Fails* detailed the 1954 infiltration of a contactee group for the purpose of testing a theory of *cognitive dissonance.* A cult group predicted the rescue of its members by flying saucers following the destruction of the world. Needless to say, the predictions did not bear out. Whereas before the doomsday date arrived the cult leaders were highly secretive and skeptical

of both the news media and new converts, the reverse came to be the case after discomfirmation of the rescue prophecy. Not only did publicity and proselytizing begin, but, paradoxically, their faith was reinforced, especially if they had made deep irreversible commitments of a social and financial nature.

A study by H. Buckner (1966) of Concordia University in Montreal gave some rough parameters of a California contactee group. The members had an average age of 65, were widowed or single women, had poor health, were interested in the occult, and had little formal education. The men either were young schizophrenics or were aged with advanced senility. Criticism of doctrines was discouraged; all ideas were legitimate.*

Another area of research within social psychology has been the influence of the mass media on the rate of UFO sightings. Simón (1979a) unsuccessfully attempted to answer this question by correlating the number of sightings per year with the number of science fiction movies per year. It was found that such a correlation would be spurious due to a number of idiosyncrasies within the data: (1) the making of a film took a long time, sometimes over a year from its inception, (2) there was a *qualitative* difference between films, whose appeal to the public was elusive to statistical analysis, and (3) the year of initial release of a film was no indication of that film's duration in theaters, nor of its return at later times. Basically, the problems encountered were typically those found within unobtrusive data (Campbell and Stanley 1963; Simón 1979c). Nevertheless, the increase of such films after the first official sighting of a flying saucer, in 1947, was suggestive, as was the thematic material found in the films themselves.

A second attempt at gauging the effect of the mass media on UFO sightings again brought mixed results (Simón 1981). Again, this was partly due to the statistical analyses. Statistical tests were run and significant results found for all the numerical data presented, but it was pointed out by the editors, quite correctly, that the underlying assumptions for the tests were inapplicable to the data, and unnecessary due to the dramatic changes evident in the data.

This second study attempted to (1) objectify public interest in fads through numerical tabulations of magazine and newspaper articles, films and television shows, and the number of public library books checked out by readers on the particular topic of interest, (2) show that the development of a buildup of UFO sightings follows the same pattern as other fads, with a strong implication that the mass media is a causal factor.

The underlying assumption to both studies is that the number of

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*From personal experience with a similar Kansas-based group, I can verify these observations. One thing that neither of the investigators mentioned is the fact that the contactees' lectures and readings are very bland and boring, with nothing of the sensationalism found in noncontactees' reports.

unidentified flying objects remains basically stable but that the public's interest in them fluctuates due to particular events in the culture (individual countries tend to have sporadic increases in reported sightings).

Conclusions

It is apparent that some of the above-mentioned studies suffer from *experimenter bias,* possibly due to the researcher's interest that UFOs be acknowledged in their true identity, either as extraterrestrial spacecraft or as misperceived terrestrial phenomena. Any psychologist planning on doing any long-term research involving UFO sightings or UFO sighters would do well to stay clear of the seductive yet vacuous UFO subculture in order to maintain the integrity of his research. To be sure, the investigation of certain areas (such as the contactees) necessitates delving deeply into the subculture.

In addition, there is a distasteful impression that instead of research data and theories being worked out and applied to society, an apparently ludicrous and disreputable aspect of society is being thrust onto a serious subject, be it psychology, astronomy, or physics.

It is frustrating to summarize what research has been done. Part of the problem is the aimlessness of the literature as a whole. Little relevancy connects one study with another except when one author pursues a question throughout several studies. Nevertheless, in light of the studies mentioned above, several conclusions can be affirmed:

1. There is a strong indication that those UFOs whose existence can be objectively verified, and are usually blobs of light in the sky, are the physical equivalent of Rorschach inkblots. They will be reported according to the reporter's mental set.

2. Belief in flying saucers and extraterrestrial life is positively correlated with youth, high income, increased education, and being male.

3. To believe that UFOs are piloted by "little green men" is the cultural norm in North America, and not, as is put forth, a minority viewpoint. It is not a sign of mental illness.

4. There is a strong indication that the rate of flying saucer sightings fluctuates according to the amount, as well as the quality, of coverage in the mass media.

5. The "contactee" cult groups, mostly based in California, are composed primarily of senile or schizoid members. They tend to be religious and low-key.

6. Due to (3) and (4), there appears to be a cultural consensus of what a "UFO" is supposed to look like and what the "aliens" are supposed to look like.

Numerous questions remain unanswered in each specialty within psychology. Some areas, such as personality correlates, remain virtually

untouched and offer a fine repository of potential data for theses or dissertations. If properly exploited, the whole topic of UFOs/flying-saucers can yield much useful information that can be applied to many areas other than the UFO subculture. Only the surface has been scratched. Future research must incorporate the experimental rigors found elsewhere in the field of psychology.

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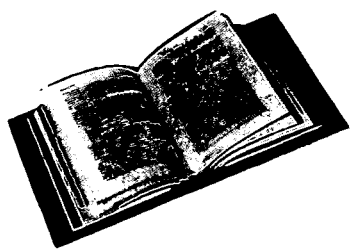

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Reviews

A Guide to Press Coverage of the Paranormal

Superstition and the Press. By Curtis D. MacDougall. Prometheus Books, 700 E. Amherst St., Buffalo, NY 14215. 615 pp. $29.95, cloth; $16.95, paper.

Piet Hein Hoebens

Superstition and the Press is a valuable book. It is a highly recommendable book. It is, alas, also a book that defies all attempts to review it properly. In his concise "Some Recent Books" column (*SI*, Winter 1983/84), Kendrick Frazier has summed up the merits and shortcomings of MacDougall's approach to his subject: "Everything you want to know about what the major daily newspapers have said about the paranormal in recent years . . . MacDougall's treatment is extensive rather than intensive. . . . His style is matter of fact: there is a minimum of commentary and interpretation . . ."

According to the blurb, "In *Superstition and the Press* America's most distinguished journalism professor and veteran newspaperman provides a devastating critique of the treatment by the press of claims of supernatural phenomena." I am afraid this is hardly a felicitous statement. MacDougall has not provided a critique, but an inventory. Structurally, *Superstition and the Press* resembles the *Book of Lists* and the *People's Almanac:* a compilation of fascinating facts, not a systematic analysis of an issue.

With remarkable industry, MacDougall has for the past three decades clipped and filed from several U.S. newspapers every item he could find that related to the "paranormal" in the broadest sense of the word. There are chapters on such diverse topics as fundamentalism, sea serpents, fortune telling, ghosts, ESP, and gurus. "I believe I come close to a 100 percent sample for the past three decades of what appeared on my subject in Chicago, New York, Washington and Los Angeles newspapers," MacDougall proudly states in the Introduction.

As a source book, *Superstition and the Press* is an indispensable aid to the

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Piet Hoebens is an editorial writer for De Telegraaf, *Amsterdam's largest daily newspaper, and a veteran observer of controversies about the paranormal.*

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active skeptic. Thanks to MacDougall's exquisitely dry wit it is also a pleasure to read. The title seems ill chosen, as it carelessly lumps together crackpot doctrines, religious superstitions, and folk beliefs with controversial but respectable research programs like psychical research and cryptozoology. A spot-check revealed that the index—an important ingredient in a book of this type—is inadequate. Most of the names mentioned in the text are missing.

I noticed several errors of fact, none of them particularly serious. For example, MacDougall lists Frederick Myers (born in Keswick, England; died 1894) and Edmund Gurney (born in Horsham, England; died 1888) among "the 20th-century Americans interested in the phenomena." The statement that the journal *Free Inquiry* "takes on Jerry Falwell's Moral Majority and other right-wing organizations and publications" to the uninitiated readers suggests that *Free Inquiry* is a left-wing periodical. Paul Kurtz, CSICOP chairman, editor of *Free Inquiry* and publisher of Prometheus Books, will be unhappy with this compliment, especially as opponents have systematically tried to link CSICOP skepticism to leftists conspiracies.

The usefulness of the book would have increased if MacDougall had consistently drawn the reader's attention to reliable sources of information on specific claims he feels have been inadequately treated by the media. He does so only sporadically, which may confuse the reader.

According to the blurb, "The author's conclusion is that newspapers, with rare exceptions, treat claims of supernatural experiences and paranormal phenomena without questioning their validity." I doubt that his verdict is fully justified. To judge from MacDougall's own myriad quotes, the newspapers' record in this field is actually better than I had expected. Sure, many journalists have been taken in by the most transparent of pseudo-miracles, but many others have done their best to remain skeptical and responsible. *Superstition and the Press* presents many encouraging examples, especially in the sections on paranormal healing. Nevertheless, I must agree that a person who had to rely solely on (U.S.) newspapers for his information on ESP and similar phenomena would be insufficiently enlightened. But can we blame the press for this state of affairs? I am not sure. Journalism is not scientific inquiry. It is not the journalist's business exhaustively to investigate the events he is covering. He simply lacks the time, and, often, the necessary expertise for examination in depth. His task is to locate the best available sources of information and to use these as carefully as he can. The journalist unavoidably has to rely on "authorities"—on people he has reason to believe know more about the subject than he does.

In dealing with the "paranormal," the newspaperman is faced with a tricky problem: There are no universally accepted criteria by which one can identify a "reliable source." Criteria that in any other context would appear solid can be perfectly useless in the borderlands of science. Readers of this journal know why we are well advised to take the interesting claims by Drs. Puthoff and Targ with a pinch of skeptical salt. However, can we reasonably demand that a newspaper reporter intuitively distrust statements made by two scientists with excellent credentials in mainline science and employed by a prestigious scientific institute? Perhaps we can demand that he try to balance his report by offering "equal space" to the skeptical opposition. However, the journalist would soon discover that the skeptics are far from unanimous in their skepticism.

What if, for example, our hypothetical newspaperman were to see a copy of

SI, vol 5, no. 1, where Ray Hyman, a member of the Executive Council of CSICOP, writes: "I find it dismaying that most of the criticism of current parapsychological research is uninformed and misrepresents what is actually taking place"? Wouldn't he have second thoughts about offering equal space to critics who seem to spend so much of their time being uninformed and misrepresenting their opponents' positions? Nobody will demand that a reporter, before reporting the claim that the earth is spherical, rush to the office of the Flat Earth Society in order to take down its comments. To judge from the public statements of some of the most vociferous antagonists, the proponents and the skeptics are each other's Flat Earth Society. This is very confusing to the journalist, who cannot possibly decide which expert is right unless he first becomes some sort of expert himself.

It is a pity that MacDougall does not discuss such issues at length. *Superstition and the Press* is an admirable achievement, but the author might wish to consider writing a companion volume where the remarkable raw material presented in the first one is subjected to a systematic analysis.

NOVA's Descent into the Paranormal

"The Case of ESP," NOVA telecast on PBS January 17, 1984. A WGBH/BBC co-production. Tony Edwards, producer/writer.

William H. Ganoe and Jack D. Kirwan

A STELLAR NOVA burns brilliantly for a time and then dies down to become just another point of light in the sky. The PBS NOVA series seems to be living up to its name. Although the well-respected NOVA is hardly dead, it certainly sickened when "The Case of ESP" was broadcast early this year. The show started out as an apparently balanced study of the topic, but then disintegrated into sloppy, one-sided propaganda. Unsubstantiated claims were blithely taken at face value and speculation was presented as fact. It looked more like an episode of "In Search Of."

The show opened with a reenactment of one of the Targ and Puthoff remote-viewing experiments conducted at SRI International. We were treated to dramatic aerial views of a marina while the voice of an actor (playing the part of the late "clairvoyant" Pat Price) clipped off descriptions of many of the objects in the scene. The scene then shifted to Russell Targ, who tells us that "for the past ten years we've been investigating a phenomenon called remote viewing. We've found that many individuals are able to accurately describe what's going on in distant locations blocked from any kind of ordinary perception."

Psychologist David Marks (from the University of Otago in New Zealand)

Jack Kirwan and William Ganoe, both at the University of Arizona, are founding members of TUSKS (Tucson Skeptical Society).

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was allowed a few words to voice his criticism, but we were quickly hit with an opposing one-two punch delivered by Charles Honorton and then Charles Tart, who pontificated: "The majority of the scientific community doesn't believe in the existence of psychic phenomena, and I'm afraid that demonstrates that the majority of the scientific community is simply ignorant."

The program did go on to point out a few of the problems of shoddy experimental design and outright fraud in the past. Susan Blackmore, a parapsychologist at the University of Bristol (England), was even given several moments in which to pooh-pooh the "experimenter effect." Blackmore said that the complaint about unsympathetic experimenters mucking up the psychic process is just too convenient an excuse. She added that she has not been able to show psychic effects in spite of the fact that she began her research as a true believer.

Alas, this was the high-point of the "balanced" presentation. From there on the show was almost completely devoted to documenting "positive" results of psychic experiments. Today's psychic researchers were portrayed as reasonable, objective, open-minded scientists conducting very well controlled experiments that yielded virtually unassailable proof of telepathy, clairvoyance, precognition, and psychokinesis.

Most of the time was spent showing dramatic re-creations of psychic experiments, while little time was devoted to critical examination of them. What criticism was included was severely abbreviated. It usually focused on very subtle points that, because of the lack of additional explanation, probably left the average viewer with the impression that the challengers were simply nit-picking.

For example, several minutes were spent on Helmut Schmidt, a former physicist, and his experiments on psychokinesis. C. E. M. Hansel, professor of psychology at the University of Swansea (Wales), had criticized Schmidt's work when he was interviewed for the program, but what was shown was a brief assertion by Hansel of outright fraud—making Hansel appear dogmatic and foolish. The scene shifted back to Schmidt's lab, and the narrator's patter focused on how claims of fraud were quite unreasonable. Then, instead of additional, more reasonable criticism of Schmidt's work, we were treated to a clip showing Ray Hyman criticizing Hansel. (Valid as Hyman's criticism might be, this format seems suspiciously like some creationist "debates" we've seen.)

In another example, Marks was interviewed for a response to the Price remote-viewing experiments. The narrator noted that Marks, using the transcripts of Price's descriptions, found that independent judges in New Zealand could match the descriptions to a list of target sites as accurately as judges in California. The presence of cues in the transcripts was mentioned, but Charles Tart countered contemptuously, "when you look at the degree of psychic functioning in the SRI remote-viewing material, the cues are trivial." To underscore Tart's rebuttal we are shown a scene in which Tart is laboriously editing out "cues." The narrator then points out that the judges in California could still match target sites, and although Marks gets a chance to complain about possible bias in Tart's editing, the viewer is left with the impression that Marks was grasping at straws.

Later, Mobius Society founder Steven Schwartz said, "I think we've reached a point now, in the last hundred years of research, that we can say a reasonable man is willing to accept the idea that psychic functioning is a reality. And the question then becomes what can we do with it." We were then shown how Mobius staff psychics have "helped" police to solve crimes and archaeologists to

find treasures from the past.

After touching on project Scanate, with its military implications, and some Russian films of psychic research behind the iron curtain, we were shown the "startling" results obtained when Russell Targ joined forces with a psychic and a businessman to form a company called Delphi Associates. Their goal was to use precognition to make it big in the silver market. A lot of attention was given to the successful first attempt. Then a tiny flicker of objective balance was spotted when the narrator spent some time on a second attempt (which was a loser) and skeptics' calls for repeatable results.

Finally we were treated to comments from Targ, Schmidt, and Tart about how we don't completely understand our universe and how learning more about psychic phenomena will help to complete our understanding of the physical universe.

"The Case of ESP" was a co-production with the BBC in London. In fact, the program had been shown in the U.K. last fall in a 90-minute version as part of the Horizon series, NOVA's counterpart in England. The producer, a Britisher named Tony Edwards, is known as a supporter of paranormal claims. He produced a Horizon program several years ago on astrology (never shown in the U.S.) that was decidedly pro-astrology.

In response to written complaints (including ours) about "The Case of ESP" following the U.S. telecast, the NOVA staff at WGBH in Boston prepared a fairly thoughtful letter (some others who wrote received the same text), signed by Terry Rockefeller, Acquisitions Producer. He acknowledged that they may have made a bit of a mistake. Co-productions, he said, require "a certain gamble of faith and trust." NOVA liked the treatment (summary) and put money up front for the co-production with BBC. He said they had some major reservations and reworked the program somewhat in Boston. (Our criticisms of the NOVA version are almost identical to earlier criticisms of the Horizon version, however, so apparently the balance remained much the same.) He indicated that the film may have erred "too much on the side of the 'believers.' . . . It is no defense, of course, to say 'we can't win them all'—we should be able to do so. This seems to be one example where we may have failed."

If an hour show were done on just one of the classes of psi phenomena, perhaps, just perhaps, sufficient time could be devoted to giving nonexpert viewers a feeling for the subject. Special attention would have to be given to the myriad of subtle (but critically important) traps awaiting any psychic researcher. But, if done correctly, it would produce a much more objective, informative program, and, with the right touch, it could be at least as entertaining as shots of beautiful downtown Menlo Park.

But what can someone who isn't a TV producer do now? Preach "ain't it awful" sermons to skeptics already in the choir? Give up in despair at the perfidy of producers? Forget the whole thing? By no means!

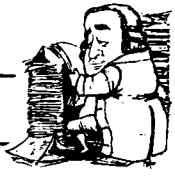
Edmund Burke once wrote something to the effect that "the only way for evil to triumph is for good men to do nothing." Ayn Rand said in one of her essays that the best way to deal with an irrational world is to "never fail to make a moral judgment." Skeptics can best serve the cause of truth by never letting the muddle-headed get away with anything!

When a loaded die like "The Case of ESP" is rolled, letters of protest should be written to local program directors, network producers and directors, and

senior officials of the sponsors (particularly at the local level). It doesn't have to be a ten-page polemic; a short note explaining why you are offended is adequate. A note or call to a local TV critic couldn't hurt either. And, if you know whereof you speak, it is a nice opportunity to get a forum—either on the air or in print—to present a rebuttal. The wheel that squeaks the loudest *does* get the most grease.

Doing battle with pseudoscience is like digging a tunnel through a mountain of horse manure; it is not the quality of the opposition that is sometimes so disheartening; it is the sheer mass. •

Articles of Note



Childress, Mark. "Quackery Is What Ails Him." *Southern Living*, January 1984, p. 86. Feature about Emory University medical historian Dr. J. Harvey Young, one of the nation's wisest students of quackery.

Cornell, James. "Science vs. the Paranormal." *Psychology Today*, March 1984, pp. 28-34. Feature article on the effort of CSICOP to counter paranormal, occult, and supernatural claims. Based largely on talks and conversations at CSICOP's recent international conference, it also contains sidebar reports, "The Merlin of Psi Psychology Does His Magical Thing" (Cornell psychologist Daryl Bem and his "psychic" performances to teach students how easily they can be deceived) and "Psychology and the Millennium" (rising cult interest in millenarian thought).

Dickson, David. "Oil Prospectors Make a Strike in Paris." *Science*, Jan. 20, 1984, pp. 261-62. One of several articles recounting the scandal in which a bizarre oil-prospecting technology, reminiscent of N-rays, was used to fleece the French government's state-owned oil company of $100 million. All the secret equipment appeared to be a massive and elaborate hoax. Eventually traps were set, again reminiscent of the traps that exposed N-rays as a delusion, and the hoax was detected, although not publicly revealed for a year.

Ebisch, Robert. "What Is Truth?" *TWA Ambassador*, January 1984, pp. 74 ff. Lively article on efforts to investigate and expose false claims of those promoting pseudoscience. Focus is on local CSICOP-type groups, such as Bela Scheiber's Colorado Organization for a Rational Alternative to Pseudoscience.

Emery, C. Eugene, Jr. "1983: Extra! Extra! Psychics Predict the Year That Wasn't." Providence *Sunday Journal Magazine*, Jan. 1, 1984. Summarizes the "fascinating, earth-shattering events that were supposed to occur in 1983," according to tabloid "psychics," and of course didn't.

Forrest, Bob. "The Cosmic Serpent: A Critique." Printed for private circulation, December 1983, 31 pp. (Forrest's address is 53 Bannerman Ave., Prestwich, Manchester M25 5DR, England.) Exhaustive critique of Clube and Napier's

book *The Cosmic Serpent.*

Hillinger, Charles. "Journal Challenges Psychics to 'Prove It.' " *Los Angeles Times,* March 1, 1984, Part I-B, pp. 6-7. Feature article about the SKEPTICAL INQUIRER based on a lengthy interview with your editor ("Everyone is involved out of a sense of intellectual integrity") and examples of several recent articles.

Hogue, Charles L. "An Entomological Explanation of Ezekiel's Wheels?" *Entomological News* 94 (no. 3), May and June 1983, pp. 73-80. Entomologist from Los Angeles County Natural History Museum supports an earlier proposed explanation for "Ezekiel's Wheels" and the prophet Ezekiel's reported vision of four-winged, four-faced spirits with eyes over their entire bodies. He argues that this version was a recounting of an eclectic image of several deified species of scarabaeine and corpine dung-beetles and their habits of rolling a ball of dung.

Marshall, Eliot. "Newman's Impossible Motor." *Science* 223:571-72 (Feb. 10, 1984). Report on controversy surrounding New Orleans inventor Joseph Newman and his claimed "energy generation system having higher energy output," as his patent application (denied by the U.S. Patent Office on grounds it is merely a perpetual-motion machine) puts it. Newman's device gained endorsements from one or two physicists and a round of publicity from a New Orleans television anchorman, but two engineers from Mississippi State University found, amidst its frequent breakdowns, "an output which is definitely less than the input."

May, Robert M. "Cryptozoology." *Nature* 307:687, Feb. 23, 1984. Review of new journal devoted to evidence of "hidden animals" (mainly humanlike and dinosaurlike creatures) finds it moderately interesting but rebukes it for taking seriously some rather silly claims (mermaids). All in all, the reviewer, a Princeton zoologist, considers it a waste of money for libraries (even as a curiosity) and regrets the dissipated efforts that could be directed more productively to studying some of the known species of plants and animals headed toward extinction.

Morris, Scot. "Scamarama." *Psychology Today,* March 1984, pp. 6-7. Winner of the magazine's contest to come up with creative pseudosciences. Grand Prize winner calls on you to leave $10,000 in your will to the originators of the scam for recovery, with interest, when you are reincarnated in some future time.

"Mr. Newman's Fantastic Machine." *Discover* (Skeptical Eye column), April 1984, p. 6. Report on Joseph Newman's machine, claimed to produce more energy than it consumes. (See E. Marshall's *Science* article above.)

Myers, David G. "ESP and the Paranormal: Supernatural or Super-Fraud?" *Christianity Today,* July 15, 1983, pp. 14-17. Article presents the grounds for skepticism about the paranormal, including no reproducible psychic experiments, no individual who can consistently evidence psychic ability, failure of "spontaneous" psychic experiences to pass scrutiny, the long history of fraud among professional "psychics," and the explosion of knowledge over the past decade about how people form false beliefs.

Myers, David G. "Illusory Thinking in Everyday Life." Chapter 5 in Myers's *Social Psychology* (New York: McGraw-Hill, 1983). Excellent review of the psychology of illusory thinking, self-deception, and credulous belief

(especially in ESP), with abundant examples from psychological studies, including several published in *SI*.

"A Psi Gap?" *Discover*, February 1984, p. 8. Skeptical Eye column criticizing pro-paranormal promoters of government involvement in psi research, such as Christopher Dodge of the Congressional Research Service. Concludes *Discover:* "Let the Soviets squander their resources on nonsense. We can put our money to better use."

—*Kendrick Frazier*

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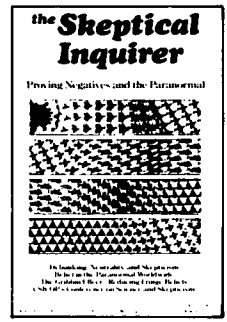

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From Our Readers

On Mead and the Paranormal

At the risk of appearing as yet another nerve-struck defender of Margaret Mead, I must express my anguish at reading Martin Gardner's "Margaret Mead and the Paranormal" (*SI*, Fall 1983).

Perhaps no other woman scholar in our time was asked her opinion on so many different matters as was Mead. More often than not, she replied and defended her positions, a characteristic of her personality more than anything else. Anthropologists would be the first to agree that Mead's willingness to venture into nonmainstream issues, sometimes quite unaware of the complexities involved, left her vulnerable to accusations of misguided liberalism. Yes, Margaret Mead did make mistakes.

But despite these occasional lapses, and despite recent allegations of unsound ethnographic praxis, Mead achieved and will maintain almost unparalleled recognition and appreciation among her peers. Her remarkable insights into cultural differences and the polemics of contemporary issues are well documented in numerous publications, especially in the memorial edition of *American Anthropologist* (June 1980).

By casually collecting articles concerning Mead and the paranormal (and not presenting a comprehensive scheme for her possible motivations), Gardner only repeats the mistake of which Mead was guilty: presenting ill-informed commentary on a subject somewhat out of one's field of expertise. The rather parochial nature of Gardner's criticism is certainly disappointing, considering he is reprimanding Mead for her supposed naiveté. Now, if Mead had made a concerted effort to promulgate the ideas of pseudoscience, von Däniken-like, she would, of course, be open to substantive criticism. But she did not.

So the answer to why "surprisingly little has been said about Mead's interest in the paranormal" is that the subject itself figured little, if at all, in her views of anthropological theory. She took the paranormal seriously; but then Mead dealt seriously with most things that came her way, especially from the general public, whose interests were always of great concern to her. She encouraged research into controversial topics like psychic phenomena because she was much too interested in achieving a unified, holistic view of humanity to ignore completely their potential import.

One gets the feeling that Gardner's attack upon the late figurehead of cultural anthropology, on the heels of Derek Freeman's, is, in fact, an assault upon the entire profession or, perhaps, the relativity of specific types of culturally based knowledge—an idea passionately defended by Mead and so many of her colleagues.

If Gardner would like to examine an anthropologist's direct approach to the paranormal, he might provide a critique of Michael Winkleman's "Magic: A Theoretical Reassessment" in *Current*

Anthropology (Feb. 1982). Such a column would be much more enlightening than one in which Margaret Mead is unfairly singled out as an unacknowledged pseudoscientist.

Robert E. Walls
Seattle, Wash.

NOVA's 'Case of ESP'

I just finished watching the NOVA program with the odd title "The Case of ESP"—as far as I can tell, it should have been called "The Case *for* ESP (ignoring most of the evidence)."

Up until now I had thought that NOVA was fairly straight, but this show was a new low in sleaze presented as fact. Give me the *National Enquirer* before you force me to watch that sort of hatchet job on reality!

Tony Edwards, the writer, must have been paid by the Targs and Schwartzes who are interested in promoting their new commercial ventures and need some free advertising. Why Targ needs advertising in view of the astounding nine-in-a-row silver market triumph is unknown. (Probably it is because the nine-in-a-row came in the middle of 100 mixed hits and misses.)

It looks to me as if SRI provided most of the footage (and probably the reverent music behind the fraudulent reenactments of the remote-viewing segments).

All in all it was a rancid presentation that set rationality back at least ten years.

Stan Ulrich
Menlo Park, Calif.

Seeing NOVA's program regarding psi, I was struck by the singular lack of the most obvious control for "remote viewing" my suspicious mind can think of:

1. Purchase a dozen 5' × 1' sheets of styrene or styrofoam, leaving one side white and spray-painting the other black.

2. Randomly select á la the target areas themselves) a pair of shapes—e.g., a square and a minus sign, a triangle and a plus sign, etc.—upon arrival at target area.

3. Set up paired shapes in a clear space at target area—the black side being convenient for cement, the white for grass, etc.

4. Cross fingers, tap heels, or whatever (it worked for Judy Garland) and hope that the "viewer"—who is *supposedly* seeing the area in real time—can spot the *pair* of shapes from "above," as seers tend to view things.

If cost is a barrier (Targ and Puthoff don't seem thrilled at budgeting for controls), *I'll* buy the bloody sheets. If blown belief is the risk, too bad. *I* can't even budget for *that*.

Mark McDermand
Represa, Calif.

NOVA's recent program on psychic powers really angered me. They did not call these people on the poor controls in their experiments, their double talk, or their outright frauds. I felt that James Randi should have been asked to add his considerable knowledge and ascerbic wit to this lamentable program.

Christian Zegstroo
Monroe, Wash.

NOVA's "The Case of ESP" was balanced through the first half and then went off the deep end. On the tests they showed, they should have picked remote-viewing places that would have large signs on them to indicate the place. The same with the ESP cards. These cards should have names on the back of them instead of symbols. This would reduce the error in the experiment.

William F. Honer, Jr.
Woodhaven, Minn.

ESP a logical absurdity

Piet Hein Hoebens loses sight of the crucial point when he asserts that all parapsychologists should not be dismissed as pseudoscientists but should, instead, be judged on their individual merits ("Sense and Nonsense in Parapsychology," *SI*, Winter 1983/84).

The very concept of paranormal energies that can move objects at a distance, give us knowledge of the future, or transfer information from one brain to another, flies in the face of reason. Such concepts contradict basic laws of physics, neurology, and psychology; do not include a plausible explanation of how such alleged phenomena are supposed to occur; and after decades of research, offer not a shred of real evidence.

The very idea that if we *don't know* the cause of something (above chance predictions in a single experiment, for instance) then we *do know* the cause (ESP, of course) is a logical absurdity. This same type of fuzzy thinking led medieval man to conclude that, because they *could not find* the seeds from which mushrooms grew and they *did not know* how mushrooms could grow in rings, they *did know* that mushrooms were the work of the devil.

Jack McDonald
Jersey City, N.J.

The Uri Award

Readers may be interested in the origin of my alleged comments which led, I am informed, to the award of a "Uri" by the "Amazing" Randi (*SI*, Fall 1983). This is: H. M. Collins and T. J. Pinch, *Frames of Meaning: The Social Construction of Extraordinary Science* (Routledge and Kegan Paul, 1982). Relevant comments will be found in Chapter 7, page 138, and footnote 2 referred to thereon. In scholarly circles it is normal to accompany an award with a citation to the work so that others can judge or appreciate its award-worthiness.

H. M. Collins, Director
Science Studies Centre
University of Bath
Bath, England

The editors reply:

In Chapter 7, and footnote 2, of Frames of Meaning, *Collins and Pinch attribute to a "respondent" the theory that a skeptic, by backward causality, could negatively influence psi testing in the past. But, in Chapter 8, several pages are devoted to a serious discussion of how this theory is a reasonable, albeit "curious extrapolation of paranormal research," to quote from the chapter's summary in the Table of Contents. Here is the paragraph that, together with the rest of the chapter, was the basis of Randi's Uri Award statement that Collins had advanced "in apparent seriousness" the theory of backward causality:*

> *There are wider possibilities, too. Certain theories (discussed above) suggest that the participants in a parapsychological experiment are not restricted to those individuals within the four walls of the laboratory, but include all potential observers of the experimental results. That is, they include all the potential readers of the journal in which the results are published. That means that the number of believers and skeptics among the eventual readership determine the outcome perceived by the experimenters themselves.*

Incorporeal complications

Professor James Alcock in his thorough review of Susan Blackmore's *Beyond the Body* covers most of the main points about the interpretation of out-of-body experiences (*SI*, Fall 1983). But there is one important issue that neither he nor, perhaps, Susan Blackmore

tackles. It is that virtually everyone in discussing these experiences tends to take a Platonic-Cartesian view of man absolutely for granted. They take it, that is to say, that we all know what it would mean to say that someone detached themselves from their body either temporarily or permanently. But this tempting assumption is simply false.

In the first place, all *person* words, including of course all the personal pronouns, are implicitly defined in terms of the peculiar sort of creatures of flesh and blood that we all are. How, therefore, could a person be said to detach himself or herself from the particular creature that he or she is? In the second place, no one has yet succeeded in explaining how such putative incorporeal entities could be identified or reidentified through time, even by themselves. Hume himself, who misguidely assumed that people, or at any rate *selves*, are bodiless collections and successions of experiences, finally confessed his inability to construct any account of "the uniting principle" of such putative beings.

Antony Flew
Department of Philosophy
University of Reading
Reading, England

Bee business

In your Summer 1983 issue, a letter from D. C. Speirs asks for information about the origin of the myth that "scientists once proved the bumblebee can't fly."

Years ago, this was discussed in an article by the late Willy Ley. Unfortunately, I cannot now remember the exact date or place, but the basic information sticks in my head. According to this, the original paper was by a physicist at a German university before World War I and was actually an early mathematical study of aerodynamics. Mr. Speirs's recollection is right, that the author demonstrated a bumblebee with rigid wings could not fly. However, he thereupon drew the obvious conclusion that bumblebees have flexible wings.

Congratulations to CSICOP and *SI* for a good and necessary job well done. I only wish you reached more people.

Poul Anderson
Orinda, Calif.

A request from Hungary

I am a a Hungarian skeptical inquirer asking for the help of fellow skeptics. I am a newspaper science-writer interested especially in fighting pseudosciences. Having published a very skeptical book on UFOs, now I intend to write a bigger book on the pseudosciences and their general illogic.

You could help by sending me books you no longer need, *skeptical* books containing *facts and criticism* on the pseudosciences. The sequence of importance is the following: Von Däniken's ideas, astrology, the pyramid effect, radiaesthesia, the Loch Ness monster, Yeti, biorhythm, Lourdes, Kirlian photos, ESP, PK, creationism, and the shroud of Turin.

G. P. Petö
Tölgyfa utca 14.
1027 Budapest
Hungary

Tucson Skeptical Society

In early 1984, the Tucson Skeptical Society (TUSKS) was informally organized. A steering committee was formed with Ken Morse, a local architect and city planner, as acting president.

The purpose of TUSKS is to monitor and (when appropriate) bring to light the activities of pseudoscientists and other yahoos here in the Tucson area. Nobody speaks for the group, but

individuals are encouraged to speak out on their own as individual members. In addition to the usual targets (pyramid power, ESP, astrology, etc.) TUSKS members also are concerned with more specific pseudoscience, such as misinformation about high technology, nuclear power, evolutionary theory, and space science.

As of now, we are rather loosely organized (no regular meetings, no dues, no newsletter), but this may change as new members join. We also believe that impaling frauds and mountebanks on the TUSKS of truth is serious business—but can be done with high good humor.

Interested parties in Tucson and southern Arizona may write to: Ken Morse, 2508 E. 23rd St., Tucson, AZ 85713.

Jack D. Kirwan
Tucson, Ariz.

Inform and entertain

Although it has been more than a year since the SKEPTICAL INQUIRER (Spring 1983, pp. 11-12) reported my disgust at job discrimination due to having (1) a "bad" zodiac sign or (2) a "bad" skepticism toward the occult, this topic continues to draw an immense amount of interest from the print and broadcast media.

In its February 1984 issue, *Omni* magazine repeated my complaints in an article entitled "Zodiac Discrimination" ("Anti-Matter," p. 89). It noted that, while the failure to adopt the astrological creed may bar you from jobs in the Greater Washington, D.C., area, the failure to be born under the better astrological signs may bar you from employment in the San Francisco Bay area.

Not only does this problem exist from coast to coast, but so does media curiosity. In the past three days, I have been interviewed by network-affiliated radio stations as far away as Montreal, Kansas City, and San Francisco. In my interviews I always try to mention the Committee for Scientific Investigation of Claims of the Paranormal, the SKEPTICAL INQUIRER, and a 1981 book edited by Kendrick Frazier, *Paranormal Borderlands of Science* (Buffalo, N.Y.: Prometheus Books). I heartily urge all other scientists to do likewise.

Our interviews should not merely entertain; they should also inform listeners of the many, many resources available.

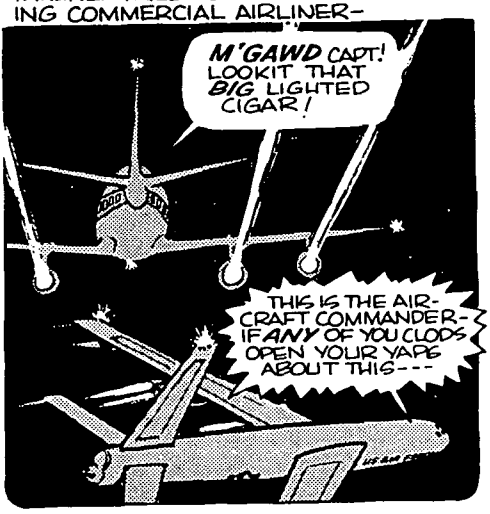
Ralph W. Bastedo
SUNY at Stony Brook
Stony Brook, N.Y.

Bob Stevens'

"There I was..."

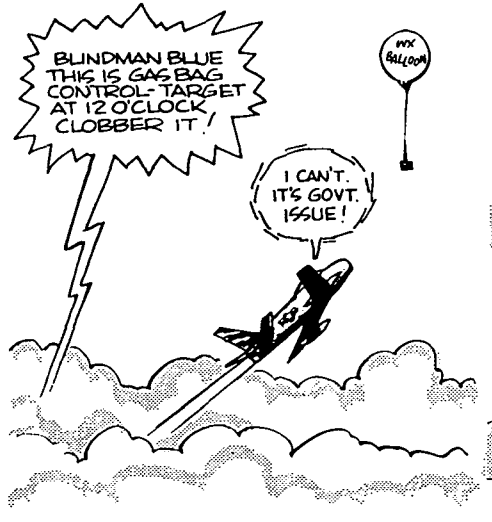
AT THE RISK OF STEPPING ON A FEW "PROJECT BLUEBOOK" TOES, WE'RE GOING TO TAKE UP THE SUBJECT OF UFO's (UNIDENTIFIED FLYING OBJECTS). A RASH OF SIGHTINGS BROKE OUT IN THE EARLY '50s & REACHED EPIDEMIC PROPORTIONS WHEN THE GROUND OBSERVER CORPS WAS IN FULL CRY BY THE '60s.

ONE INCIDENT INVOLVED A B-52 ON A NIGHT REFUELING MISSION WHICH MISTAKENLY TRIED TO HOOK UP TO A PASSING COMMERCIAL AIRLINER—

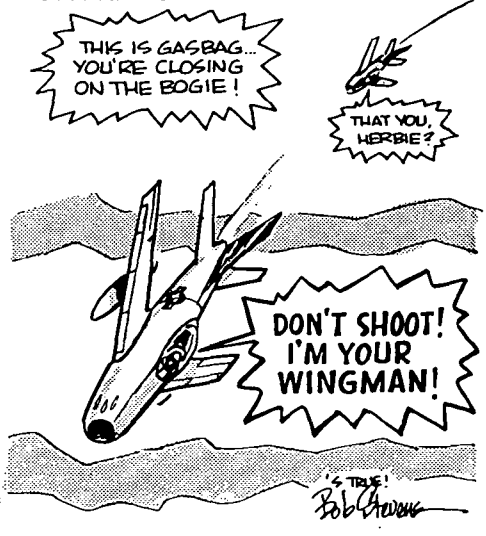


F-86Ds SCRAMBLED AT WRIGHT-PAT FOR NIGHT INTERCEPT OF, SAY, THE MOON WOULD BECOME "TARGETS" TO KEEP THE GROUND OBSERVERS HAPPY.

YOURS TRULY WAS SCRAMBLED TWICE FOR UFOs...



...ANOTHER TIME OUR FLIGHT BECAME SEPARATED IN WEATHER—



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The Committee for the Scientific Investigation of Claims of the Paranormal

Paul Kurtz, Chairman

Scientific and Technical Consultants

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UFO Subcommittee: Chairman, Philip J. Klass, 404 "N" Street S.W., Washington, D.C. 20024.

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Local Organizations (groups with aims similar to CSICOP's)

Arizona: Tucson Skeptical Society (TUSKS), Ken Morse, 2508 E. 23rd St., Tucson, AZ 85713.

California: Bay Area Skeptics, Robert A. Steiner, Chairman, Box 659, El Cerrito, CA 94530.

Colorado: Colorado Organization for a Rational Alternative to Pseudoscience (CO-RAP), Béla Scheiber, Director, P.O. Box 7277, Boulder, CO 80306.

Northwest Skeptics: Michael R. Dennett, Chairman, Washington Coordinator, 4927 S.W. 324th Place, Federal Way, WA 98003; John Merrell, Oregon-Idaho Coordinator, 4885 S.W. 152nd Ave., Beaverton, OR 97007.

Pennsylvania: Paranormal Investigating Committee of Pittsburgh (PICP), Richard Busch, Chairman, 5841 Morrowfield Ave., #302, Pittsburgh 15217.

Texas: Austin Society to Oppose Pseudoscience (A-STOP), Charlotte M. Cranberg, President, P.O. Box 3446, Austin 78764. Dallas Society to Oppose Pseudoscience (D-STOP), James P. Smith, Science Div. of Brookhaven College, Dallas 75234. Houston Society to Oppose Pseudoscience (H-STOP), Steven D. Schafersman, Chairman, P.O. Box 541314, Houston 77254.

The Committee for the Scientific Investigation of Claims of the Paranormal

The Committee for the Scientific Investigation of Claims of the Paranormal attempts to encourage the critical investigation of paranormal and fringe-science claims from a responsible, scientific point of view and to disseminate factual information about the results of such inquiries to the scientific community and the public. To carry out these objectives the Committee:

- Maintains a network of people interested in critically examining claims of the paranormal.
- Prepares bibliographies of published materials that carefully examine such claims.
- Encourages and commissions research by objective and impartial inquirers in areas where it is needed.
- Convenes conferences and meetings.
- Publishes articles, monographs, and books that examine claims of the paranormal.
- Does not reject claims on a priori grounds, antecedent to inquiry, but rather examines them objectively and carefully.

The Committee is a nonprofit scientific and educational organization. THE SKEPTICAL INQUIRER is its official journal.